

Important

Lectures
on
Hygiene.
Vol. III.

ab
75

(From vol. II)

Men of great intellectual performance with

delicate or imperfect health:

Richelieu, Calvin, ^{Descartes}, Pope, Cooper, Watt, A. W. Robertson, ^{Kitt.}
Rich. Baxter, J. Stuart Mill, Charles R. Darwin -

Great men with vigorous health:

Alexander, ^{Washington}, ^{Franklin}, Caesar, Napoleon, Wellington,
Walter Scott, Lord Palmerston, Guizot, Audubon,
A. Reichenow, Agassiz.

The rule is with the latter class.

Mens sana most readily dwells, & effectively acts, in
Corporis sano.

Lecture XXVII (continued)

AIR.

The air is important. In a warm room, we cannot concentrate the mind.

LA PLATTE.

This is noticed in changes of temperature. In the La Platte states, the people are quarrelsome when the North wind prevails. Sirocco. — Language of Tropics.

AMERICAN CLIMATE.

In the American climate, there is a peculiarly exciting quality. This is seen in the insane asylums.

Foreigners who come here are affected in the same way.

FOOD & DRINK

The importance of food & drink is great. If we eat much, our minds will not be brilliant. Indigestion interferes with the brain.

CONCENTRATED FOOD.

In mental work, concentrated food is necessary. It is probable that in America, we eat too much.

ALCOHOL

In regard to drink, alcohol is bad. Stimulants are disadvantageous unless the system is below par. Drink beer, think beer.

GREAT DRINKERS.

Some great men were great drinkers; for instance, Danl. Webster & Edgar A. Poe.

See p. 9

AVERAGE
AGE
AT DEATH.Average Age at Death

152 French Savants	69 yrs.
Howard University Graduates	58 "
British Poets	56 "
Celebrated Preachers	69 "
Statesmen	70 "

VICTIMS OF
OVER-WORKED
BRAINS.Victims of Over-worked Brains

Biéclard	anatomist
Périer	minister of state
Romilly	" " "
Castlereagh	" " "
Chatterton	poet
Laman Blanchard	"
Buckland	geologist
Hugh Miller	"
Admiral Fitzroy	sanitarian
A. W. Robertson	preacher
Toucanlt	scientist

They would have been better without it. Burke never drank; nor Lincoln nor Whittier.

EXERCISE.

Exercise is necessary.

Lecture XXVIII.

SLEEP.

Sleep is necessary, especially after brain work. If we had not brains we would require no sleep.

CHILDREN.

It is most necessary in early life. An infant, sleeps $\frac{1}{2}$ its time. A child prematurely born, sleeps nearly all the time. Children under 10 yrs, require 10 hours in 24. Adults require from ~~8~~ 7 to 9.

CONTINUOUS.

Sleep should be continuous. This is difficult in the practice of medicine. Rising in the night, merely to go to the window, is equal to the loss of two hours, particularly in children.

MISTAKE
TO
WAKEN
SUDDENLY

It is a great mistake to wa-
ken children at a certain hour. They should waken by degrees. If the house catches fire, they should be carried out asleep.

A Humboldt —

Napoleon I

As to Fred. The Great — Prince Charles of Hesse, in his autobiography says that F. generally retired at 9, & was a very good sleeper — at work again at 6. So, also, in regard to Nap. I, Bouvineau contradicts the common rumor.

(Sir G. Blane — Richieu's statue
(Hammered on Wakefulness)

End of 28th Lecture, 1869.

Even for an adult, sudden rousing is bad. It is unjustly thought to be lazy to lie in bed in the morning. The true plan is to waken by degrees. This is especially so if the brain is fatigued.

TRUE PLAN.

If the constitution is healthy, only a certain amount of sleep is required.

SHORT SLEEPERS

There have been some noted short sleepers. Frederick the Great, & Jno. Hunter, slept 5 hours in 24. Elliot slept 4 hours. It is asserted that a French general ~~slept~~ but 1 hr. in 24. This is incredible. *Another account makes it 4.*

WANT SLEEP
OF SLEEP IS
INJURIOUS.

The injurious effects of want of sleep are at first, nervous debility. In the end life is shortened.

HOW
TO
GET
SLEEP.

It is well to know how to get sleep when deprived of it. In sleep less blood goes through the brain than awake. Dr. Hammond says that one mode of bringing it on, when troubled by insomnia caused by brain work or excitement, is to sit up & go to sleep in a chair.

Sir Mr Scott wrote before breakfast

This will not always insure sleep.
It is only a last resort.

HABIT.

Habit has effect on sleep. Dr. Wood, from long night-study cannot now sleep at night.

HYGIENIC
TIME
FOR STUDY.

It is most hygienic to study in the day, and sleep at night.

This is shown by the rotation of day & night; and by the fact that artificial light injures the eyes.

MORNING.

For hard mental work, the morning is the best time.

CIVILIZATION

Mental Influences affecting health:-

Civilization. There are several ways of looking at this. 1st. Compare the savage & the civilized, generally.

Some think the savage is the state of nature. Ours, though too artificial, approaches nearer.

SAVAGES.

Savages are not as large & muscular as civilized men. Their lives are shorter, disease & insanity are frequent. The savage is inferior to the civilized man.

end. Compare the degrees of civilization. A fabulous idea is entertained of the men of a few generations ago.

IDEA
OF
THE MEN
OF
FORMER
CENTURIES.

They are supposed to be larger and stronger than we. It is just the opposite. A sword of two centuries ago is too little now. Men of our day cannot get into armor of that time.

While we cannot assert our power as superior to the Greek, our power of acquisition is greater. There has been no deterioration.

AVERAGE
AGE
AT DEATH.

Average Age at Death [Page 2]

Chaucer, Milton, & Shakespeare reached full age. So did ^{most of the printing press} Macaulay, De Quincy, Wordsworth, Southey, Scott, Jefferson, Jackson, Everett, Clay, Cuvier, and Humboldt. Mary Somerville, 92; ^{"Mole. Science"} ^{near 90.}

INSANITY.

Does insanity increase with advance of civilization? Statistics are imperfect.

INCREASE

In Great Britain^{at}, the increase is from 1 in 7000 to 1 in 300. In U. S. from 1 in 978 to 1 in 378. In Massachusetts in 1854, it was from 1 in 676 to 1 in 300.

Balance, Maxim: For the perfect development and activity of any important organ in the human economy, it is necessary to maintain a balanced development & action of every other important organ ~~in~~ the system.

U.S.

In the U.S. there are more young insane than anywhere else.

In this country the greatest age is between 20 & 30 yrs. In Europe it is 30-40.

DEFECT
IN
SYSTEM.

Suppose insanity has increased. This does not prove that civilization has caused it. It shows a defect in our system.

EDUCATION

Neglect of physical culture, a contempt for exercise, ^{and over-excitation of the brain & nervous system,} is what causes it.

Education ^{is called} may do good or harm. It should include intellectual, moral, & physical culture.

ITS OBJECT

The object of ^{mental} education is to give the ^{full capacity} mind the use & command of its powers. ^{It is not to make him vigorous by exercises.}

FORMER
IDEA
OF
EDUCATION.

^{merely} It was once supposed that to be educated, one must know several languages. The best mind is that which has the most power to use facts.

YOUNG

It must be remembered that the young ^{brain} mind is tender. It must not be forced. When a child is learning its letters, its mind cannot be concentrated. A child should not have to learn

— Fred. Froebel first Kindergarten —
 Miss Peabody in U. S.

End of 2^{9th} Lecture, 1867 X

*as in gymnastics; light & heavy.

much by task-work. The best way is to let it use its senses and ask questions. It will learn more in this way.

No child should go to school ^{unless a kindergarten} before 7 or 8 years of age; ^{if then it should have but 3 or 4 hours a day.}

As preparatory, the Kindergarten (Kindergartenn) is very good. The child's mind is developed on a natural plan. The average age of the pupils, is 5 years. No lesson is allowed longer than 15 minutes. At 7 years old, a child should have 10 hours sleep, & 1 of occupation; and so on according to age. X

There are two systems of study. One urges systematic task work; & the other aims at ^{educating} spontaneous efforts of the mind. No healthy mental activity is ^{disagreeable} disagreeable. As in gymnastics, both systems may be combined, the light being first.

In studying, the ^{ought to} interest must be maintained. There must be something to rouse up the mind. We can take

EDUCATION OF CHILDREN

KINDERGARTEN

TWO
SYSTEMS
OF
STUDY.

* By placing before the mind as often as possible those objects, conceptions and thoughts which of their own nature tend to arouse desirable emotions; and keeping away all ^{those} of an opposite nature and tendency.

advantage of the automatism of the brain.

This applies to the emotional ^{*}as well as the intellectual powers.*

IMMATURITY
OF
CHILD'S
BRAIN.

It is wise to remember that a child's organism is immature. It cannot control itself well. Parents should not expect their children to show as much control as they themselves. Instead of compelling a child to stop crying, its attention should be drawn off.

EDUCATION
MAY
DO HARM

Education, ^{so called} may do harm. ^{to the child} Healthy children, girls especially, often lose their health at school. Chorea, ³nervousness, inflammation of the brain, ²and the foundations of insanity, are often contracted at school.

HEALTH
FIRST!

As soon as the brain is jaded & the appetite lost, school should be left. Health first, education afterwards.

ENGLISH
SCHOOLS.

The English schools have 3 or 4 hours daily. In medical colleges, the time is too long. More could be learned, with fewer hours of work. The brain will not

CAUSES
OF
INSANITY.

Causes of Insanity In 1000 Cases

Physical Causes

Intemperance	— 164
Epilepsy	— 68
Childbearing, &c.	— 45
Vicious Habits.	— 40
Bodily Diseases.	— 18
Other Diseases of Brain	— 14
Old Age	— 8
Injuries.	— 4

Moral Causes

Domestic Troubles	— 241
Grief.	— 88
Wounded Feelings	— 84
Religious Excitement	— 56
Disappointed Affection.	— 53
Fright	— 48
Political & other excitements	— 34
Over-study *	— 8.

Undetermined — 27 cases.

* At Pa. Hosp. for Insane, of whole number from
establishment to 1869 (inclusive) 5335, — over-study 45.
Excluded all health. 973.
Intemperance — 417

absorb as much in 7 hours as in 4.

GIRLS.

Girls should be more out of doors than they are, and they should go to school longer.

The brain can be over-worked even in the adult.

VICTIMS
OF
OVER-WORKED
BRAINS.

victims of over-worked brains. = page 2.

Hugh Miller ruined a good constitution by over-brainwork.

DANGERS
OF
STUDY.

The hygiene of study is then of interest. The dangers of study, are, cerebral exhaustion, predisposition to disease, general debility, dyspepsia, and loss of eye-sight.

Lecture XXIX

CEREBRAL
EXHAUSTION.

Cerebral exhaustion may or may not be retrievable. If the functional action is impaired, memory and the ~~practical~~ powers are the first to give way.

LONG
TIME
REQUIRED.

It takes a very long time to build up the brain power again (about 3 years)

SYMPTOMS.

The symptoms of over-brain-work, are drowsiness & tightness in back of the head. The diseases which are caused, are

The Secret of doing a great deal of work (brain-work especially) is, - to take a great deal of repose.

End of 29th Lecture, 1869 -

DISEASES
CAUSED.

apoplexy (change in the blood vessels), paralysis, softening (by waste), and insanity. In the last there is atrophy.

ANIMAL
FOOD.

Close study demands animal food.

In debility of the body, where exercise cannot be taken, repose is best.

OVER-STUDY

Distressing nervousness, dyspepsia, and consumption of nerve force, are & injury to sight are caused by over-study.

ERRORS
OF
SELF
MANAGEMENT.

The errors of self-management, ^{on the part of studious men} are, absolute excess in amount of study, indifference to sleep, ^{to omit} continuousness of study, monotony, no exercise, irregularity of meals, and bad light.

HOW
MANY
HOURS?

How many hours should we study? The Germans are the most enduring people. Next, the English. The French & Italians have activity. We are a combination. The maximum amount for a German is 14-16 hours in 24.

SCOTT
&
BULWER.

Scott found 6 hours a day enough. Bulwer, 3 hours. The safest ^{maximum} number is 8 hours.

WRONG
IDEAS.

There are two very erroneous ideas: to study late at night, and to rise at sun

all free

rise. "Early to bed & early to rise" should be carried out in both respects.

STORIES
OF
SHORT
SLEEPERS.

Some ~~exam~~ stories are related of short sleepers. Napoleon is said to have slept but 4 hours in 24. This is a great mistake. He sometimes slept very long.

Humboldt was silent while it was asserted that he slept but 4.

Few appreciate the disadvantage of long continuous study. The mere sitting long in one position is bad. Fatigue of any organ follows continuousness.

ONE
HOUR.

One hour at a time is enough to study without relaxation of the attention. Two are enough without exercise.

MONOTONY.

Monotony is more fatiguing than variety. The brain is a multiple organ. When we are wearied with one study we should take another.

VARIATION.

Variation of pursuits may explain the endurance of great men. Aristotle, Seneca, Humboldt.

EXERCISE

Bodily exercise prevents an accumulation of blood in the brain.

Regularity of meals, & time for digestion

are necessary.

EYE.

The eye is injured by dim or flickering light. The Argand burner is the best.

RECAPITULATION.

Recapitulation:- 3 hours work is enough for the untrained mind; & for any. Sleep 7 hours. Sit one hour at a time; only 2, without $\frac{1}{2}$ hour exercise. Never read in ~~one~~ book more than 3 hours a day. Take 2 hrs. exercise a day (dumb-bells if necessary). Never eat and read at the same time. Do not study for $\frac{1}{2}$ an hour after a meal. Read as little as possible by gas light; never by any imperfect light.

IDLENESS.

While over-work is so injurious, idleness is more so. Dull persons often get insane. The normal balance of the mind is not kept.

GENERAL EDUCATION

That system of education which is general, is best. It is a mistake to force a child in one subject. The moral & intellectual development is thus injured.

IMAGINATION IN U.S.

In America, the imagination is too much developed. Here the number of novels read by one person, is about one a day and two

Phenol. — Mucin. — Tallow. — Speraph.

End of 30th Lecture X

on Sunday. One year is enough.

EMOTIONAL
BALANCE.

Even the emotional balance may be destroyed. Benevolence, religious excitement &c. may cause this.

RELIGION.

True religion is naturally ^{wholesome for all} ~~healthy~~. Many patients have religious delusions caused by injudicious religiousism.

Other excitements, as political are often dangerous.

MARVELOUSNESS.

The propensity of marvelousness has to be kept down. Isms - Pseudo-Sciences.

WANT OF
STEADINESS
IN U.S.

In the American mind there is a want of steadiness. We are satisfied with nothing less than some great affair, to stir us up.

SYMPATHY.

Effect of Sympathy:— If a person yawns another will do it. If a girl in school, has hysterics, 2 dozen will have them in a week. When nitrous oxide is given, all who take it will do as the first did.

REIGN
OF
TERROR.

On a larger scale we see it in "The Reign of Terror"; the fall of Sumpter, the surrender of Lee, & the death of Lincoln.

GREAT
EVENTS.

Great national events are the results of popular impulses.

* About this time (1873) the American
 epidemic of crime is, — homicide & suicide together!
 It is wonderful, how often (almost every day now) we
 read in our papers of some man killing another man, or,
as often, a woman, and immediately taking his own life,
 In Japan & China, hari-kari is frequent, without
 murder, — indeed in place of it sometimes. The Western
 modification of this is yet more fearful. I believe the
 newspapers to have much to do with such epi-
 demics.

27
"Let me choose the ^{ballads} songs of a nation, and I care
not who makes its lauds."

SQUINTING

A school master who squinted, soon found several of his boys to squint.

EXTRAVAGANT
Epidemics.

In Europe, in the 15th, 16th, & 17th, centuries there were several epidemics of extravagances, such as the mewing of a like cats which affected the inmates of a nunnery.

N.E.
WITCHCRAFT.

The witchcraft in New England, & the Revivals may be so explained.

SUICIDE

Suicide is sometimes epidemic. A soldier in a hotel of Paris hung himself to his ~~bed~~ post. Within a week, several others hung themselves to the same post.

HOMICIDE

Homicide also, may be so; hence the objection to public executions. *

HYSTERIC

The morbid effect of sympathy is seen in hysterical females. A young woman had an abdominal swelling as large as that produced by a pregnancy of 8 months. When etherized, the enlargement disappeared. The doctor who was attending her, sent her to Philadelphia. She was watched by the nurse, who seeing her asleep, found the tumor to disappear.

EXAMPLES.

In the hospital, a girl got in a

FORMS OF
INSANITY.Forms of Insanity.

Acute Mania
 Chronic Mania
 Monomania
 Melancholia
 Dementia.

NUMBER
OF
INSANE.

<u>Number of Insane</u>			
In France,	about	1 in	800 — 500
Norway,	"	" "	350
Rhineland	"	" "	660
England & Wales	"	" "	575
Massachusetts	"	" "	300

MOST
FREQUENT
CAUSES.Most Frequent Causes

- 1st. Intemperance
- 2nd. Reverse of Fortune
- 3rd. Domestic troubles
- 4th. Loss of Friends.

fit, while a class was going through. The effect was that she got a fit, every time it passed. She was cured by being told that if she would be subjected to a new treatment, that a red-hot iron would be run along her spine.

Lecture XXX.

In order to appreciate mental health we should know something of mental disorders.

The nature of Insanity is hard to define.

Diseases of the brain, affecting the mind may be sensorial, intellectual, or emotional.

Hallucination, as in delirium tremens is sensorial. This may not constitute insanity. If the person who is subject to it, is aware of it and has a will strong enough to resist, he is not insane.

Intellectual delusion is seen in delusions

Emotional, or moral insanity, may be separate from intellectual. Most insanity begins with the moral.

DISEASES
OF
THE
BRAIN

HALLUCINATION

DELUSIONS

MORAL
INSANITY

End of 30th Lecture, 1869.

LOSS
OF
CONTROL.

The criterion of insanity is the loss of the control of the will.

The insane are alienated. They cannot interpret any things as others do.

FORMS OF
INSANITY.

Forms of Insanity = Page 28.

IMBECILITY.

Imbecility is the same as dementia.

IDIOCY.

Idiocy is congenital imbecility.

CAUSES
OF
INSANITY.

The causes of insanity are hereditary and exciting.

HEREDITARY.

Insanity is the most hereditary disease. Insanity of the mother is transmitted more than that of the father. The insanity of the mother generally goes to the daughters; that of the father to the sons.

There are fewer insane women than men. Men are exposed to more excitement.

AGE.

In Europe, the most insanity is between 30 & 40 years. In the U. S. it is 20-30.

SEASON.

Season has influence. There are more cases in summer, in June & July, and more in cool climates.

MODE
OF
LIFE.

The mode of life, country or city, has an influence. In France, in the country,



OCCUPATION.

Occupation makes a difference

MARRIAGE.

As to marriage or celibacy, the latter has most. In G. Britain, with twice as many married as single, there are more insane single. The difference is greater in men.

SAVAGE.

Savage & civilized:— There are less in the former state but they die sooner.

NUMBER of insane — PAGE 28

CIVILIZED.

The excess of insane in civilized nations is probably due to intemperance.

INTEMPERANCE

In one hospital 12 per cent was produced directly by intemperance. Indirectly a man's intemperance may drive his wife mad, & the disposition may be transmitted to children.

The causes of insanity are moral, mental, & physical.

The first are most common, especially in females.

Causes of insanity — Page 16.

there are ^{1.42} 7.79 to 1000 people. In the city 7.79 in 1000.

In England, country 1 in 820, city 1 in 1200.

OMITTED

ORDER
OF
FREQUENCY

In one asylum, the order of frequency was, in males; alcohol, reverse of fortune, domestic troubles, loss of friends.

In females; loss of friends, reverse of fortune, abuse of alcohol. (Liquor & - ship) ←

SUICIDE

Suicide:— Since the beginning of this century the number of cases in France has been 30,000. Out of 4000, most, in the country, were between 40 & 50; in Paris, between 20 & 30. In 1822, children under 9, & 1 under 5.

THE NUMBER of suicides in England, according to a report of the Registrar General, averages 1300 annually, and varies from 64 to 70 annually for each million of the population. Hanging is the death generally adopted by suicides, more than two-fifths of them adopting this mode. In France the annual rate is 110 per million of the population; in Belgium, 45; Italy, 30; and Spain 15.

SEASON
FOR IT.

It is a misty November the suicides' month. hot weather.

and on a fine day. The most common time is 8 o'clock A.M., next noon, & then night.

WHO
COMMIT IT.

Fewer mountaineers commit suicide, than lowlanders, & fewer women than men.

INSANITY
IS
SLOW.

The signs of insanity are of consequence.

A few fatal cases are sudden. The door keeper of the first Congress died of joy. A young man called out in the

OCCUPATION.

Occupation makes a difference

MARRIAGE.

As to marriage or celibacy, the latter has most. In G. Britain, with twice as many married as single, there are more insane single. The difference is greater in men.

SAVAGE.

Savage & civilized: - There are less in the former state but they die sooner.

NUMBER of insane - PAGE 28

CIVILIZED.

The excess of insane in civilized nations is probably due to intemperance.

INTEMPERANCE

In one hospital 12 per cent was produced by intemperance. Indirectly a man may drive his wife to a position may be taken.

The causes of insanity are moral, mental, & physical.

The first are most common, especially in females.

Causes of insanity - Page 16.

there are ^{1.42} 7.79 to 1000 people. In the city 7.79 in 1000.

In England, country 1 in 820, city 1 in 1200.

OMITTED

ORDER
OF
FREQUENCY

In one asylum, the order of frequency was, in males; alcohol, reverse of fortune, domestic troubles, loss of friends.

In females; loss of friends, reverse of fortune, abuse of alcohol. (Liquor & - ship) ←

SUICIDE

Suicide:— Since the beginning of this century the number of cases in France has been 30,000. Out of 4000, most, in the country, were between 40 & 50; in Paris, between 20 & 30. Two were children under 9, & 1 under 5.

SEASON
FOR
IT.

It is a mistake to call November the suicides' month. The most are in hot weather, and on a fine day. The most common time is 8 o'clock A.M., next noon, & then night.

WHO
COMMIT IT.

Fewer mountaineers commit suicide, than lowlanders, & fewer women than men.

INSANITY
IS
SLOW.

The signs of insanity are of consequence.

A few fatal cases are sudden. The door keeper of the first Congress died of joy. A young man called out in the

war, died of excitement

Generally, it is more gradual.
If attended to in time, it could be
often prevented. Damians, assassin -

PREMONITIONS
PAIN

The premonitions of insanity are
1. pains in the head. Thousands have
headache, often hereditary, or they may
have neuralgia, yet these are not signs
of insanity. When not thus accounted
for & when other signs are present. Pain
should be Inhabitants of cities more than 1/2

NERVOUSNESS

2. Nervous of admissions & frame the popula
this without 1 county 3 to 1 cities.
naturally a
bad sign.

of 8797 Inds. mean, 3014

SLEEPLESSNESS

3. Sleepless. Of 4919 men, or
This is one of the worst
es bring on 980 from domestic troubles; of 5438 women, at-
ening where 1569 same. ~~not within the time~~

EXHIBITION

Recovery most rapid in 5 or 6 months, & from 25 to 35 years

apoplexy

Gloom

5. Gloom.

7. Great mutations in a short time, are

~~Open free places are latterly~~
~~being introduced into Paris Hosp~~
~~itals.~~

1866-7
 Legent & Motet - 1 insane & 500
 people in France: Idiots & Cretins
 being included in some statistics. As to
 the last, in asylum of 100 admissions,
 92 insane, 7 idiots & 1 cretin.

Of 48992 admissions, 4620 educated;
 1248 ecclesiastics & religious, ~~off~~ doctors
 apothecaries & midwives 833, professors, lawyers
 & others more 1093 - artists, sculptors, painters, musicians
 860. Large proportion. over

war, died of excitement

Generally, it is more gradual. If attended to in time, it could be often prevented. *Damiens, assassin -*

PREMONITIONS
PAIN

The premonitions of insanity are
1. pains in the head. Thousands have headache, often hereditary, or they may have neuralgia, yet these are not signs of insanity. When not thus accounted for & when other signs are present, pain should be attended to

NERVOUSNESS

2. Nervous irritability. Some however have this without its being a sign. If anyone naturally calm becomes irritable, it is a bad sign. 3. Want of power of attention.

SLEEPLESSNESS

4. Sleeplessness. This is a serious sign. This is one of the modes in which moral causes bring on insanity. It is least threatening when caused by mental effort.

EXHILARATION

5. Mental exhilaration, unnatural excitement. This is often observed before apoplexy.

GLOOM

6. Gloom & depression, without cause

7. Great mutations in a short time, are

Influences & Conditions most favorable to the
Preservation of Mental health:

Sound bodily constitution;

Balanced education, of all the faculties;

Regular occupation, involving, or allowing, some
daily exercise in the open air;

Sufficiency of regular, uninterrupted sleep;

Moderation in diet, & in all excitements & indulgences;

Lastly, a sound and tranquilly sustained
Religious faith; or rather, "faith, hope & charity, these three,"
of which the greatest is vivifying & elevating $\alpha\gamma\alpha\pi\eta$.

← Mixture of Sanity & Insanity:

Johnson - Cooper - Byron - J. Howard - Cruden F.W. of
— "social catastrophes." — Prussia —

Mental Chorea (winklow)

very serious signs. A gentleman about to be married, was exceedingly elated. In a week he had a fit of melancholy, & destroyed his life.

The reversal of ordinary temperament is a bad sign.

Aversion to friends is a very common sign.

PREVENTION. In prevention, the treatment must be adapted to each case. Some need cathartics, some alteratives, &c. They must be free from care.

TRAVELLING. Travelling is not good, unless the mind is merely jaded with monotony.

SECLUSION. Seclusion is necessary, both to restore them, & to prevent catastrophes. This step is generally taken too late. A gentleman who was melancholy for years cut his throat. Had he been in an asylum, this would not have happened.

IMPROVEMENT IN TREATMENT. In the present century, there has been great improvement in the treatment of insane. They used to be chained in cells, &c.

W. M. C.

[Classif. & description of diff. forms of insanity
Acute Mania
Chronic Mania - Varieties (Responsibility) - (Periodicity)
Monomania
Suicidal - Homicidal - Kleptom. - Pyromania, Melthomania
Melancholia
Dementia.

Therapeutics of insanity. Indications, according to state -
 whether inflammatory, - hyperemic, - of irritability, Toxic
choreic, - or atrophic. or Sympathetic
Depl. - depletion? cold to head - purgation - quiet - exerc.
Hyperemic, some of same measures - Toxic Sympathetic, &c.
Irritable, Calamities ^{warm bath} opium, hyoscy., conium, br. pit., chloral.
Choreic - moral treatment especially.
Atrophic - Rest - Tonics - hygienic recuperation - &c.]

End of 31st Lecture 1877.

The first improvement was in Cork retreat in England. About 20 years afterwards, in France, good treatment was begun. Now they have as little restraint as possible.

Nothing should prevent a willingness to go ~~there~~ to an asylum.

PATHOLOGY.

Pathology of Insanity:- Inflammation of the brain is to be distinguished from insanity, yet they glide into each other. One idea of insanity is that there is at first too much blood in all the brain, & that it subsides except in one part.

DEGENERATION
OF
TISSUE

There is degeneration of tissue, & atrophy. The brains of insane are lighter than others. We cannot make out all the peculiarities. ✱

ETIOLOGY

The next subject is Etiology, or causation of disease.

The causes of disease are:

1. Hereditary, as cancer, consumption, gout, epilepsy, & insanity.
2. Dynamic. This is connected with

Causes of DiseaseHereditary, as gout, consumption, & ~~syphilis~~ epilepsy, mania, cancer.Dynamic; as over-exertion, ^{temperance} ~~syphilis~~ & idleness; ven. excess.Mechanical; as traumatic tetanus, or apoplexy from position.Obstructive; as neglect of bowels, & impurity of atmosphere, malarial.Conditional; as heat-stroke, or cold-catching.Ingestive; as trichiniasis — or poisoning — or over medication.Contactive; as small-pox, syphilis — or stonationAtmospheric; as ^{malarial fever,} yellow fever, cholera (in part).

TEMPERAMENTS.

Temperaments

Sanguine.

Nervous.

Lymphatic.

Sibrous.

the functional activity. Exs. over-work, sensual excess, &c.

3. Mechanical, wounds, laceration, position.

4. Obstructive, uncleanness, ill-ventilation, lowels. &c.

5. Conditional, extremes of heat & cold, moisture & dryness, & electricity.

6. Engestive, poison, intemperance, abuse of medicine. &c.

7. Contactive, syphilis, gonorrhoea, small-pox &c.

8. Atmospheric, cholera & yellow fever.

Lecture XXXI. As to

~~Enough has been said of hereditary disease~~, ~~it is the tendency~~ & not the disease, which is inherited, almost always.

The period of life, in which it occurs is generally ^{about} the same as in the parent.

Some members of a family, or some generation may escape.

Sometimes the disease is inherited in a modified form.

There are certain influences which may

of inferior constitutional vigor. In large cities, the vices of communities cause the deterioration of many families — especially through Syphilis and intemperance. Mortality of children is by such causes much increased, in a marked degree by affections of the nervous system, of which convulsions are a very frequent manifestation.

INFLUENCES
ACTING
ON RACE.

affect whole races. The Esquimaux are affected by climate. The southern S. A-mericans, by food & climate. The Bush-man, by savagery, food, & climate.

CIVILIZED
LIFE.

Even in civilized life there are ~~special~~ ^{some} influences. Thus in malarial regions there is a certain type of men,

DYNAMICAL
CAUSES.

Examples of dynamical causes are fatigue, indolence, & sensual excess.

MECHANICAL.

Examples of mechanical ^{causation} are wounds & injuries, position (stooping), pressing the chest, tight lacing.

When a person is apoplectic, stooping may endanger life.

OBSTRUCTIVE.

Obstructive causes are very important. The lungs may be obstructed by foul air.

CONDITIONAL.

Conditional causes are, heat & cold, dryness, & dampness. The thoracic organs are the most affected by these, but not exclusively. Sudden exposure of a part to vicissitudes causes "a cold."

COLDS.

The physiology of colds is as follows. Suppose a draft of cold air is on one

44.

3

part. The arteries are constricted & the blood driven away. The action of the sweat glands is lessened, & the blood becomes loaded. There is a tendency to local congestion from the first cause, & of local deposit from the second.

PNEUMONIA. This theory is verified by pneumonia. During its height, chloride of sodium leaves the urine. At the same time, the expectoration from the lungs contains it.

As to electrical influences we do not know much.

INGESTIVE Ingestive causes are poison, errors of diet, &c.

They may do harm from quantity or from quality.

A deficiency of vegetable food causes scurvy. An excess of animal food causes gout.

SEX AND TEMPERAMENT. Age, sex and temperament have ^{each} a modifying influence.

There are differences at different

End of 31st Lecture, 1869

INFANCY.

times of life. In infancy, the nutritious powers, & capillary circulation are most active. The ganglionic part of the nervous system predominates. The surface is delicate. The process of making animal heat is feeble. Some organs, as lungs, are not developed.

DISEASES.

The diseases of this period are cutaneous diseases, disorders of digestion, convulsions, glandular derangement, pseudo-membranous affections, ~~pneumonia~~.

ERUPTIVE
FEVERS.

Eruptive fevers ^{are met with} ~~occurs~~, oftenest at this time because they occur but once in a lifetime, and children are very susceptible to all morbid agencies.

ADOLESCENCE

In adolescence, the arterial system is well developed. The emotions are strong. In the female, menstruation occurs.

DISEASES

The diseases of this time are active, congestions, inflammations and hemorrhages.

MIDDLE
LIFE

In middle life, there is the most normal balance. Morbid tendencies now show themselves: gout, stone, dyspepsia, &c.

OLD
AGE.

In old age, the venous circulation is slow. There is atrophy & degeneration. Nutrition gives way. Passive congestions, dropsy, catarrhal affections, urinary complaints, apoplexy, fatty degenerations, &c. occur.

SEX

Sex:—The female has greater impressibility & mobility, with less endurance.

There is a tendency to exaggerate the difference in constitution between the sexes.

It is not the uterus but the ovaries which constitute sexual difference. There is moreover a cerebral difference.

Uterine, ovarian, & mammary affections are ^{of course} peculiar to the female.

TEMPERAMENT.

Temperament:—A temperament is a peculiarity of constitution compatible with health.

The temperaments are ^{commonly named as} the sanguine, nervous, lymphatic, & bilious.

This latter name is a bad one. It should be fibrous ~~or~~ ~~sarcous~~.

100011
117OLD
AGE

SEX

SANGUINE

In the sanguine, there is a high vascular development with activity of the system. Inflammation, hemorrhage & fever are most likely to occur in this.

Some take account of the brain in temperaments. Thus the sanguine man is said to be inconstant & fickle.

EXAMPLES

Examples of San. Temperament, are Mark Anthony, Charles II of England, Murat.

NERVOUS

Nervous temperament does not mean a high, ~~strong~~ nervous development, but an excess of excitability. There is a deficiency of blood. The Brain may be either large or small. The person is generally slender, pale, & wiry.

EXAMPLES.

Examples: Frederick the Great of Prussia, Voltaire, Pope, John Randolph. Dr. Geo. B. McClellan. Cowper — (T. Shillitoe)

LYMPHATIC

Lymphatic temperament is characterized by its slowness; predominance of the nutritive powers, and less active circulation and nerves.

FIBROUS

The bilious (or fibrous) temperament

Natural temperaments -
 X French, Dutch, English, Dutch.
 Ages & temperaments

Seldom mixed temperaments.
 Temperaments may be modified.

Sanguine - nervous - Lymphatic.

At Hampton - 69-70 -
 See next p. 82 &
 p. 94

Combination of temperaments most frequent; as
 Sanguine-nervous - fibro-lymphatic - fibro-sanguine, &c.

is characterized by endurance. There is no association with bilious disorder. There is a full development of bone and muscle, without activity.

EXAMPLES.
Washington, Napoleon I & III, —†— Grant, Garfield.
The next subject is

Special Etiology.

Epidemic cholera has already been treated

CHOLERA
MALARIAL
FEVERS

Malarial disorders are very important in this country. The best account of these is found in Drake's "Diseases of the Great American Valley."

DIVISIONS.

Malarial fevers are divided into intermittent, remittent, and pernicious. The first is found in all continents in warm climates, in certain places.

LOCAL.

They are always local & never exist in thickly-built cities. A ^{Summer average} temperature of 60° is necessary. They are most violent in tropical & subtropical climates. In the East they ^{often} prevail over rocks. Surface water favors them.

EAST.

SEA.

The sea is comparatively free, unless in the vicinity of ~~the~~ marshes. They follow the clearing of woods.

ORGANIC
MATTER.

Organic matter has been detected, but no gases.

The first culture of soil causes them.

INCUBATION.

A period of incubation, about 3 weeks, often follows exposure.

There is a difference in the health of seasons which without any known physical cause.

BOUNDARIES.

The boundaries between an unhealthy & a healthy place are often narrow, a grove of trees, a large house, &c. often being sufficient.

CITIES.

Malaria ~~does~~ does not prevail in thickly built cities. Every case may be explained by the person having gone into the country.

OUR
CITY.

Example In our city, a row of houses at 15th & Columbia Av. had several cases. There was an open lot with a pond, on the opposite side. This pond was.

End of 32nd Lecture x

drained & no more cases occurred.

The most remittent fever is in southern places, intermittent more northerly.

Congestive fever is ^{almost} always south.

FACTORIES.

Large factories diminish malarial fevers.
~~Cape May is sometimes visited.~~

CULTURE
OF
SOIL.

~~Culture of the soil produces them.~~
It was once thought that sulphuretted hydrogen was the cause, but it often exists where they do not, & not, where they do.

HYPOTHESES
OF
THE
CAUSE
OF
MALARIAL
FEVERS.

- There are several hypotheses of cause.
1. Electrical, of ^{Sir} J. Murray. Dr. Lush of Phila.
 2. Meteoric, or Conditional. (oldham)
 3. Malarial gases
 4. Vegeto-animalcular

The meteoric theory is not ~~tenable~~ ^{tenable}.

The cause is a material poison.
Tropical regions furnish abundant vegetation. Cold ends the attacks.
The latency of the affection, & its endemic character show that the cause is vegetable organic growth. X

HOW TO ESCAPE
FALL
FEVER.To Escape Fall Fever, in a
Malarious Locality

1. Avoid the evening & night air.
2. Never go over tainted ground with an empty stomach.
3. Have a fire in the house, always in damp weather.
4. When much exposed, take a few grains of quinine daily.

Yellow Fever.YELLOW
FEVER.

1. Is met with, only in warm weather, & near the sea.
2. Is rarely diffused over continuously over very wide region.
3. Is not contagious.
4. Is rarely conveyed by fomites.
5. May be carried in foul ships.
6. May be prevented by Sanitary Police.

Lecture XXXII.

SALISBURY.

Salisbury thought that the cause of malarial fevers was a minute vegetation.

DR. MITCHELL.

Twenty years ago, Dr. Mitchell thought that malarial fevers depended on fungous plants. Many facts gave plausibility to it. He showed the coincidence between the presence of malarial fevers & of fungous plants. ^{After the itch animalcule, many observers, Schönlein, Erythrae, among Germans, & especially, proved parasitic vegetation on skin diseases.}

WILSON.

Wilson doubts the vegetable character of these organisms.

Some say that they do not produce the disease.

ORGANISMS

These organisms are present in the tartar of the teeth. Bacteria are the most common. ^{Found anywhere in dead or dying animal fluids. (Beale).}

EXAMINATION
OF THE
BLOOD
OF A SHEEP.

In 1863, the blood of a sheep which had died of spheric apoplexy, was found to contain them. They are not destroyed by sulphuric acid. They are absent in healthy sheep.

FERMENTATION

Fermentation ^{thought by Haller & others to be} is produced by vegetation. Some are acetous, lactic, &

butyric

INDIA.

In India a fungous disease of the foot is fatal unless the foot be amputated.

HOSPITAL GANGRENE

Hospital gangrene may be produced in this way.

DR. SALISBURY'S EXPERIMENTS.

On examining the expectoration of intermittent fever, many forms were found but only one was constant. It was an algaoid plant. Pieces of glass were suspended over malarious ground. These organisms got on the upper side. Palmella. Fresh earth was taken from a prairie bog. The same forms were found.

They are more or less abundant at different heights. They are higher at night.

DRY STRAW,

Dry straw is good to put over a place infected with aque.

EXPERIMENT.

Dr. Salisbury tried to give the disease. He placed some earth with these forms, under a window. Those who slept in the room got the disease.

These observations require confirmation by some body else.

DR. HOLDEN.

Dr. Holden says that on a vessel at sea there was intermittent fever. It came from an open store room. In this room there was much mildew.

SALISBURY.

Dr. Salisbury concluded that caustic lime should be spread on miasmatic ground.

SCHUYLKILL.

Some years ago the country seats on the Schuylkill were uninhabitable in fall on account of ague. It is quite different now. The disturbance of the water prevents it.

ROME

The malaria of the Campagna near Rome was caused by clearing a forest.

RICE
SWAMPS

The rice swamps of the South, are terribly malarious.

Gr. Dismal
Swamp.

The Great Dismal Swamp is not malarious, on account of the cypress trees.

PREVENTION.

Prevention:— We should keep within doors from before sunset till after sunrise. Passing over malarial places is dangerous. Never pass such a place,

with an empty stomach. The lungs & skin more probably than the stomach absorb the poison, but a want of nutrition is unfavorable.

FIRES.

We should light a fire to dry our rooms. Hammond says that mosquito-nets will keep out malaria.

QUININE.

Quinine is a good preventive. Livingstone doubted its effects. The amount which he used was small. Less than 4 grs. are not good. Duchailu, 6 grs. This subject is open for investigation.

YELLOW
FEVER.

Yellow Fever comes next. It is a subject of controversy. Against its being contagious are, A commission of the French Academy, Humboldt, London Board of Health, Sanitary Commission of N. Orleans, Dr. Drake of Ohio, La Roche of this city, Barton of N.C. and, Geo. B. Wood. For contagion are, Monette, Alison of Edinburgh, McWilliams, & Prof. Dixon.

The conclusions are

1. The cause is a specific material, perhaps a vegetable organism.

CONCLUSIONS.

2. The poison may be propagated by germs.

3. Seldom north of 48° N. latitude, and not much below the equator.

It is always near the Atlantic Ocean, & never goes to the Pacific

It visits W. Africa, N. South America, W. Indies, Charleston, Rio Janeiro, N. Orleans, Mobile, Savannah, Gibraltar, Natchez, Vicksburg, N. York, Boston, Philadelphia, Marseilles, Barcelona, Leghorn, Sicily, Carthage.

It goes in the train of the Gulf Stream.

Continued warm weather, high dew point, & as organic decay are necessary for its existence.

It is rarely much diffused.

The poison ~~can~~ never ~~be~~ produced in the body of the sick.

It is seldom transported by fomites.

Ships transport it. A vessel at the N. Y. quarantine gave yellow fever to other ships and even to the shore.

It is generated by an accumulation of

WHERE
IT
EXISTS.

WHAT IS
NECESSARY
TO
PRODUCE IT.

NOT
CONTAGIOUS.

FOMITES.

^ Causation of many, indeed most important disease
has been already incidentally alluded to in the
previous lectures of the course. We may, therefore,
be more brief now concerning them.

foul air. If this is absent, no extension occurs.

CLEANSING.

Cleansing & fumigating will deprive a ship of the power to transport it.

It should never exist because it is preventable. B. Butler had ~~very little~~ ^{no epidemic} in N. Orleans.

The removal of the people of an infected district puts an end to the endemic. †

TYPHUS.

Typhus:- Typhus fever is not confined to one place or season. Jail, camp, ship, & typhus fever are the same.

OCHLESIS.

Ochlesis (crowd poisoning) is its cause. After that it becomes contagious. One person infected, has the poisoning power of a crowd.

OPINION
IN
ENGLAND

The weight of English authority is against this view. ^{Budd} Parkes & Hiltken lean to the belief that a special typhus poison is necessary.

(An Egyptian vessel bound for Liverpool with 475 Arabs, got typhus. It originated on board.)

Dr. WOOD.

Geo. B. Wood believes in crowd poison

TYPHOID FEVER.

Causes of Typhoid Fever.

1. Constitutional Predisposition.
2. Nervous depression
3. Epidemic influence.
4. Local insalubrity

CHOLERA INFANTUM.

Causes of Cholera Infantum.

1. Intense Heat.
2. City Atmosphere.
3. Infantile susceptibility.

ERYSIPELAS.

Causes of Erysipelas.

1. A peculiarity of the Air
2. A morbid tendency in the patient.
3. Mostly, a lesion of the skin.

PUERPERAL FEVER.

Causes of Puerperal Fever.

1. Stagnated Atmosphere.
2. Uterine lesion.
3. Uterine vascular absorption.

Lecture XXXIII.

TYPHOID
FEVER.

There is much obscurity about typhoid fever. It is rare, over 40 and under 10 yrs. It seldom occurs twice in a lifetime.

Agencies which cause nervous depression promote it.

It has been ^{sometimes} apparently contagious. But in the cases where it was so it was probably confounded with typhus fever or perhaps blended with it. - Mindner.

In 4 cases of convalescence from typhoid fever, typhus followed. This shows the distinction between them.

Murchison of England says that typhoid fever is caused by foul air. ^{pathogenic} There are many objections to this.

Foul drinking water carries it.

Dr. Flint of Boston says that 28 out of 43 people of a village had typhoid fever.

Only 3 families escaped. Two of these lived far apart from the rest, and the third had quarrelled with the ~~impurer~~ ^{impurer}. All but these three used the same water.

CAUSE
FOUL
WATER.

Dr. Jackson, Smith of Conn., Rauth, Budd & Simon, & Watson, believe in this theory. ^{Christison.}

Dr. PARKES.

Dr. Parkes says he knows of bad drainage without typhoid fever, & vice versa.

It is difficult to believe in its contagiousness. It is met everywhere, in all climates, & every season.

MIXED CASES.

~~Mixed cases explain apparent contagion.~~

Dr. Wood says that in a constitution predisposed to it typhoid, anxiety, foul water, typhus poison, &c. will bring it on.

It is safe to admit the promotive influence of water and air. Hence disinfection is good.

TYPHO-MALARIAL FEVER.

Typho-malarial fever is a mingling of two types of disease. There are 4 elements of causation

- 1st. Ordinary cause of typhus
- 2nd. Autumnal Malaria
- 3rd. Cause of Typhoid
- 4th. Scorbutic cause.

The type of the fever varies according to

the combination.

This mixture causes complicated study. The different elements cannot be overlooked. Quinine is good.

LA ROCHE.

La Roche wrote a book on the relation of pneumonia & malarial fever.

TYPHOID
PNEUMONIA.

There are two meanings to typhoid pneumonia. 1st. exhaustion with pneumoplia. 2nd. epidemic or endemic. In the south there is a malarial influence. This pneumonia is called bilious pneumonia.

SPOTTED
FEVER.

Spotted fever is not well known. Even the name is not settled. Some prefer to call it cerebro-spinal meningitis. Cerebro-spinal fever best of all.

It is usually sudden, with headache, delirium, eruption in most cases, stupor, death in 6 hrs.

Boudin mentions it in 1568. It occurred in Geneva in 1805, Italy, 1841, Ireland, 1847, Phila, in 1813. In 1863, there were 50 deaths in Phila. Pa. Most were at Manassas, Ill. &

Norristown. Few cases were in the built-up part of the city.

COINCIDENCE
WITH
WAR.

Boudin noticed the Coincidence of its prevalence with war. As special poisons make special diseases, so here there may be a material poison. The long existence of filth in clothing, may cause a chemical action.

A lady of Germantown was mending soldiers' clothes. She got the fever.

PLAGUE

Plague is a subject of controversy. It is not contagious. Two facts prove this. 1. It is a disease of a season. 2. Sanitary police kills it out. After draining a swamp in Cairo, plague disappeared. Dr. Caldwell, in Phila., 25 years ago or more.

CHOLERA
INFANTUM

Cholera Infantum is caused by an intense summer heat, the air of a large city, & infantile susceptibility. We can trace the no. of cases by the thermometer. No physician should encourage keeping infants in the city in summer. Removing to the country is curative.

DYSENTERY.

Dysentery may be inflammatory or epidemic. The ordinary kind may occur at any place or time.

It is common in high regions near malarial places. Some say that malaria causes it.

The drinking water of limestone regions is said to cause it.

ERYSIPELAS.

Erysipelas is ^{commonly} endemic in large surgical hospitals. Peculiarity of atmosphere, morbid tendency, and lesion of the skin are necessary.

It is caused by effete matter thrown off from an inflammation.

PUERPERAL FEVER.

Puerperal fever has the same kind of cause. In the Penna. Hos. the attendant of the surgical ward ^{is not formally} does not attend the obstetric ward.

In erysipelas the lesion is on the skin. In puerperal fever it is on the uterus.

It is different from peritonitis. Some say it is peritonitis; some, pyemia, & others that it is a true fever.

Puerperal fever is transmissible.

100 deaths in a single week
from diphtheria in Jan., 1875
in New York city.

TRANSMISSIBLE.

A certain physician of this city gave it to every woman whom he attended; ^{private pestilence.}

The few facts do not prove anything. They are merely enough to put us on our guard.

Washing the hands with chloride of soda, is good.

Some will not attend both puerperal fever & erysipelas: right.

DYPHTHERIA.

Diphtheria appeared in this country in 1856. It is a pseudo-membranous affection.

Its cause is epidemic & limited. It is a domestic pestilence, falling heaviest on the poor.

Excessive changes of temperature cause it.

INOCULATION.

Sometimes it is hard to tell the cause. Attempts have been made at inoculation, but they have failed. It

is far from certain that diphtheria is not moderately contagious.
Cholera next: see my book on it.

Public Hygiene1. External, Exclusive;Quarantine: (Personal, never's
Ship inspection &c.)

Available only against personally contagious diseases.

Ship Inspection and Purification are important against Yellow fever, Cholera, & Typhus.2. Internal, Sanitary Police.1. Against ordure diseasesCleanliness of Houses & Streets, Markets, Wharves &c2. Against contagious,
endemic & epidemicConstruction of Buildings.Drainage & Sewerage &Conservancy.Supply of Water & FoodNuisances, Avocations.Public VaccinationMedical Attendance of the Poor.Diseases:
small pox -
malaria -
Yellow fever -
Cholera.At Hampden
See, next,
p. 94

Lecture XXXIV.

ZYMOTIC
DISEASES.

The diseases which have just been considered are zymotic or ~~ent~~thetic. The term zymotic (I ferment) is a good one. Liebig suggested an analogy to fermentation to the production of a chemical change. There is an analogy to combustion and decay.

All forces are capable of propagation. These analogies are important.

Pollini of Milan introduced the use of sulphites to arresting zymotic change.

DISEASES OCCURRING
ONCE.

Scarlet fever, ~~mumps~~, yellow fever, typhus & typhoid fevers, occur but once in a lifetime.

REASON
WHY
THEY
OCCUR ONCE.

Dr. Simon of London asks why do they occur once only? He says there may be in the system, a material which unites with the virus, the disease being thus caused. He compares this to the saturation of a chemical body.

CHEMICAL
ACTION

If vinegar be poured on carbonate of ammonia, it will effervesce until saturation is complete.

FOR CHILBLAINS. — A writer in the *Apotheker Zeitung* recommends an aqueous solution of iodine and tannin as a remedy for chilblains. He says that the application has been tried with good results when properly applied. About an ounce of tannin is dissolved in half a pint of water; seventy-four grains of iodine are dissolved in an ounce and three fourths of spirits of wine; the two solutions are then mixed, and enough water is added to make up the whole to two and a half pints. The remedy is applied once daily, the best time being before going to bed. The mixture is gently warmed over a very slow fire; the affected part (as the hand) is dipped in it while still cold, and held there until the liquid, on being stirred, feels uncomfortably hot. The vessel is then removed from the fire, and the hand is dried over it, without gloves. The vessel used must be of earthenware or porcelain, not of metal. Care should be taken not to use too great a quantity of iodine, especially when abrasions are present. Four or five applications are usually sufficient.

Just so, virus comb it will no ease. This

As other vaccination, so, combine in efficacy of

Phthisis. Inheritance generally often is the cause.

Bad air, not enough food, confinement, want of light, & debilitating excesses, act in producing it.

In a prison at Vienna, in 13 yrs, 59 deaths in 100 were from phthisis. In a better ventilated prison 8 in 100 were of phthisis.

Similar facts are seen in the E. Indies. In the British army & navy the proportion is very large. In some ships it seems to be contagious.

Monkeys in the Zoological Gardens generally die of it. Cows are subject to it.

VIRUS ACTION

VACCINATION

PHTHISIS

CAUSES

EXPOSURE

MONKEYS

on trial dis-

s sat will the

not

dentary debilitating

84.

notability from Connecticut in diff. avocations.
 Laborers, (including teamsters, agriculturists,

rows. Laborers, and porters), 11.5 per 1000; coopers, 8.5; machinists (including blacksmiths and metal workers), 8.2; lawyers, 7.8; seamen and watermen, 7.7; boot and shoe makers, 7.7; barbers, 7.2; carmen (including coachmen and teamsters), 7.1; printers, 7.0; painters, including varnishers, 6.9; masons and stone cutters, 6.8; carpenters (including cabinet makers, upholsterers, and joiners), 6.6; dressmakers (including milliners, mantua-makers, tailoresses, and seamstresses), 6.4; teachers (female), 6.0; tailors, 5.7; bakers, 5.5; bookbinders, 5.3; cigar makers (including tobacco workers), 5.2; domestic servants, 5.1; butchers, 4.6; clerks (including salesmen and accountants in stores, banking, brokerage, insurance, and manufacturing establishments, and civil employés of government), 4.6; hatters, 3.8; physicians and surgeons, 3.8; pedlers (including hucksters and commercial travellers), 3.1; merchants (including traders and dealers), 3.1; stablemen, 3.0; teachers (male), 2.2. N.Y. (Health Report, 1872).

VIRUS
ACTION

Just so, he says, when small-pox virus combines with all this material it will no longer come out as a disease. This is very plausible.

VACCINATION

As other acids will produce this saturation, so, he says, cow-pox virus will combine with this material. Hence the efficacy of vaccination.

PHTHISIS

Phthisis. Inheritance generally but not often is the cause.

CAUSES.

Bad air, not enough food, sedentary confinement, want of light, & debilitating excesses, act in producing it.

EXPOSURE

In a prison at Vienna, in 13 yrs., 59 deaths in 100 were from *phthisis*. In a better ventilated prison 8 in 100 were of *phthisis*.

Similar facts are seen in the E. Indies. In the British army & navy the proportion is very large. In some ships it seems to be contagious.

MONKEYS.

Monkeys in the Zoological Gardens generally die of it. Cows are subject to it.

Lebert, villonin, & —
inoculation of phthisis.

It seems at last that inoculation with anything that causes slow ichoromic suppuration may, in some animals, generate a tuberculoid affection, — with deposits, in the lungs & elsewhere, not distinguishable from some of the deposits of tuberculous cases. How much of them is really identical with tubercle, & how far the pathogenetic process is different from that of phthisis, are questions yet open.

ATTEMPTS
TO
PRODUCE IT.

Some thought that it could at any time be produced by foul air, a dark place, poor food &c. Rabbits were experimented on, and a deposit was found in their lungs. But it was not tubercle but ova of small animals.

LOWNESS
OF
SITE.

Phthisis is common in proportion to lowness of site. A high & equal climate, dry & not subject to extremes is best.

All that depresses organic energy tends to phthisis, if not intense enough to produce acute diseases.

SKIN

The importance of the action of the skin is overlooked. When it acts, the lungs are free.

PUBLIC
HYGIENE.

PUBLIC HYGIENE.

Public hygiene is founded on personal.

Its Divisions (Page 82.)

QUARANTINE.

Quarantine has already been considered in the introductory lecture. In the lectures on cholera.

✓ If so in Ireland, 1868 — & nearly so
other years there & in Scotland. The unsettlement
of public opinion about vaccination in Paris, 1870,
owing to an alarm about vaccinal syphilis, caused it to
be comparatively neglected. There occurred in the first
half of the year, 7 or 8 thousand cases — with a mortality
of 1 in 6 or 7 cases.

ITS
FAILURE
ALWAYS.

The diseases against which it has been employed, are plague, small-pox, typhus & yellow fever, cholera, scarlet fever, & measles. It always has failed.

Even at Malta where the system was so rigorous, it failed to keep out small-pox.

It is available only in personally contagious diseases.

SMALL-POX.

Small-pox is contagious. If it were possible to keep it from our shores, we, of course, would not have it; but we cannot prevent its coming.

VACCINATION.

Besides, vaccination is a sure preventive. In Providence, R.I. the disease has been banished by public vaccination.

TYPHUS.

Typhus fever is contagious. It comes in ships. Here again there is something better than quarantine. viz. ventilation & cleanliness.

YELLOW
FEVER
AND CHOLERA

Yellow fever & cholera are preventable at sea.

DETENTION
FOR
INSPECTION.

The only true quarantine, is dirt quarantine. Ships should be detained for inspection. There should be a place for inspection,

Modest - running
during our war

TWO
STATIONS.

removed from the city. There should be a near & a remote station. If a vessel is obviously in bad condition it should be stopped at the 1st. station; if not, it should be allowed to go to the 2nd. where if there is the slightest suspicion, it should be detained.

This would prevent accumulation of vessels, which would cause disease.

In N.Y. the great defect is the want of land accommodations.

DETENTION
OF
PERSONS.

In cholera or yellow fever, detention of persons, does no good, but harm. It should be abolished.

When a vessel arrives with cholera, the crew & passengers should be scattered over the country. This has been done, with good effect, at Baltimore, & this city, more hurriedly 4. f. cases.

MEASURES
TO BE
TAKEN.

Bathing, disinfection, changing position of merchandise, steam, submerging, destruction of bad food, ejection of bilge water, &c. should be attended to in such cases.

SANITARY
POLICE.

We now pass to SANITARY POLICE. In all cities Boards of Health are established

Their authority is necessarily high.

Divisions = Page 82.

INSPECTION
OF
HOUSES.

^{from time to time,} Inspectors should be sent to examine every house. Cellars, privies, water-closets, & yards, especially, should be examined. ^{Most of all when an epidemic, e.g. cholera or yellow fever, is anticipated.} The removal of offal, dogs, goats, hogs, etc. is important. ^{About hydrophobia & dogs. Don't chain them up.}

STREETS.

The cleaning of streets rests with the municipal authorities. Our streets used to be very clean; now they are not.

WATERING
THE
STREETS.

In respect to watering the streets, it is good if the streets are clean. If they are dirty it is bad. Water hastens the decomposition of organic matter.

SALTING

Salting the streets is a bad practice. There is no evidence to show that produces any diseases. It is antiseptic. Still it is unsanitary. The snow is melted rapidly. Instead of banks of snow, we now have streets of slush. The air is damp and chilly. Colds are thus promoted.

DRAINAGE

Drainage is either natural or artificial.

Unhealthy Employments.

Working in lead, or lead paints.

Coloring wall-paper, &c. with Scheele's
green. Silvering mirrors.

Making lucifer-matches.

Needle-grinding. Fork-grinding.

Glass blowing.

Cotton-spinning.

Working in feathers, wool, hair,
bristles, flints, coal.

Manufacture of aniline, & colors from it.

Vulcanizing india rubber. Cleaning sewers.

Working in deep mines.

Sedentary Employments.

SEWERAGE.

It is not identical with sewerage which includes removal from houses.

The facilities for drainage are of importance in choosing the site of a city.

WHAT
TO
DO
WITH
SEWAGE.

What to do with sewage and conservancy is not settled.

Victor Hugo, treats ably of the sewers of Paris. They are now, a city beneath a city. But, much waste, yet.

Lecture XXXV.

METHODS
OF
DRAINAGE.

The two modes of ^{artificial} drainage are, emptying into rivers, lakes seas, &c., and pouring over fields, for irrigation.

The first is the more common. The other is used in many towns of Europe. In Edinburgh it is very successful. The refuse of the city is, every day, carried out in wagons and sold to the farmers.

This irrigation must be periodical. It would not do to be flooding fields every day. There must be reservoirs to keep it in.

STREET
DIRT.

There are two methods of disposing of street dirt. To sweep it into the

* Dr Stramm, a German epidemiologist, observes that "good privies are far higher signs of civilization than grand places and museums of art."

sewers, or to cart it away. The latter is much the better way. Either will do, if properly carried out.

There are three ways of disposing of conserwancy: by deep ^{private} wells, by connecting water-closets with sewers, and by carrying it away to fertilize fields.

The wells will do, only when they are so deep that they meet running water or very permeable soil. That they are not so in Philadelphia, the ^{one} horrible night-carts attest. The air & water are tainted ~~now~~ by them, when long neglected, especially, ^{now pretty well disinfected} *

Connection with sewers is good if the sewers are managed rightly. There must be a good descent and plenty of water. There must also be a valve to prevent the return of foul gases: and no sharp angles or corners to allow of detention.

The sewers themselves should have traps, & should be capable of being entered and cleaned.

The least objection is to be urged against the utilizing plan. Besides

CONSERVANCY.

WELLS.

CONNECTION
WITH
SEWERS.

USING
FOR
FERTILIZING

its benefit, it is economical.

LONDON
SEWERS.

In the London sewers the velocity of flow is $1\frac{1}{2}$ miles per hour. Before 1839 they emptied into the Thames at low tide. At high tide the water was carried up past the city, injuring health. Now they empty at high tide & further down the river. When the improvements are completed, the total cost will be \$20,500,000.

PARIS
SEWERS.

In Paris the Government, so that if a collision they were put clearly and manifestly in the wrong. Banks replied substantially in the affirmative. As to abolishing the office, he showed that could not be done with a proper observance of international courtesy to Portugal. A person, however, should require a man to represent as a representative of the government abroad who had published a recommendation that one department of the Government proceed against another department of government by force; therefore Congress in the last session the only thing left for it directing the Executive under no circumstances to continue the payment of his advances for market receipts and animals. Sheep & liquids are made into fertilizer. it is carried

BERLIN
&
CHINA.

In Berlin Schenck, of Ohio, took strong ground. Mr. Harvey, whom he spoke of as one of the bread-and-butter brigade. Stevens, of Pennsylvania, sent up to the desk and had read the letter in controversy. Raymond, of New York, repeated that was nothing in it that deserved such as had been applied to it by Mr. Stevens, and suggested in reference to the witness shown by Mr. Stevens, that he was the called jade witness. In Switzerland of the do

SWITZERLAND.

A very good way is to mix it with dry earth.

PRUSSIAN
COMMISSION.

A Prussian commission sent to England, reported unfavorably of the water-drainage system. It was

THE LONDON SEWERS.—The Corporation of London is engaged in the construction of an extensive system of sewers, which, when completed, will cost \$21,000,000 in gold. Of these sewers, eighty two miles have already been built. The drainage to be carried off by this extensive system is derived from an area of about 117 square miles, and a population of 2,800,000. The capacity of these sewers is estimated at 14,000,000 cubic feet. In their construction, as far as progressed, 3,500,000 cubic yards of earth have been excavated, and 880,000 cubic yards of concrete and 318,000,000 bricks have been used. "This grand system of sewerage," says the London Lancet, "has been constructed under buildings, and over and under canals, rivers and roadways, from twenty-five feet above to seventy-five below the surface, without any important casualties or interference with the public convenience or traffic. The arrangements of the metropolis would appear to be more wonderful and successful below the surface than above."

its benefit, it is economical.

LONDON
SEWERS.

In the London sewers the velocity of flow is $1\frac{1}{2}$ miles per hour. Before 1839 they emptied into the Thames at low tide. At high tide the water was carried up past the city, injuring health. Now they empty at high tide & further down the river. When the improvements are completed, the total cost will be \$20,500,000.

PARIS
SEWERS.

In Paris there are ~~receptacles~~ for market offal, ~~fecal~~ matter, & dead animals. In the privies, the solids & liquids are separated, & the former made into poudrette, an excellent fertilizer.

BERLIN
& CHINA.

In Berlin & China, it is carried out in pails every day.

SWITZERLAND.

In Switzerland, it is thrown in front of the doors!

A very good way is to mix it with dry earth.

PRUSSIAN
COMMISSION.

A Prussian commission sent to England, reported unfavorably of the water-drainage system. It was

60 tons per head of population, sewage, annual average.
 Excreta of 50 individuals enough to fertilize 1 acre.
 Population of Philadelphia — 15000 to 16000 acres.

Drainage (from rain) best by permeable
 sewers — sewers (artificial) by impermeable
 underground sewers.

reported "wasteful".

VALUE
OF
SEWAGE.

Gubig estimated the value of the London sewage at 30 or 4 cts pr. ton. In a dense population the value is \$1.68 per head per annum.

IRRIGATION.

If sewage be used for irrigation, it must be on crops which can be benefitted, & on soil which will absorb the bad material.

DR. GILBERT.

Dr. Gilbert ^{in England} tried four fields and found that very little ammonia & organic matter escaped absorption.

A gentleman of this city had the urinals emptied on his garden every morning.

GRASS.

Grass is the most benefited.

There are two arguments used against the fertilizing plan.

1st. A large field thus irrigated would be a nuisance near a large city. This is not so.

2nd. Troublesome parasitic diseases would be thus increased. This does not seem likely. There is no evidence of it.

ARGUMENTS
AGAINST
FERTILIZING.

At Freiberg Mines, Germany (Saxony?)
 the age to quit work on account of
 asthmatic disability was 40 years.

Now, 45.

X
 + Smelters — (See Dickson) —

unwilling to have mortality of their vocation
 lessened — because wages would be lessened also!

UNHEALTHY
EMPLOYMENTS

Unhealthy Employments - (Page 94.)

LEAD

Those working in lead may get either lead colic, or lead palsy. In the former there is shrinking of the abdomen. The palsy affects the extensor muscles of the wrist, first.

PREVENTIVES

The preventives are washing the hands well before meals, avoiding the fumes of lead as much as possible, and if much exposed, taking dilute SO_3 .

ARSENIC

Coloring wall paper with arsenic, or even sleeping in a room so covered, injures health. Some children playing with a baby-house, so covered, were affected by the arsenic. One baby, in Lynchburg Va., killed.

Dr. Taylor says that ophthalmia & nervous diseases are caused by it.

It is the light green only which is so colored.

Silvering mirrors with mercury.

PHOSPHORUS

In making lucifer-matches, there is danger of phosphorus poisoning especially ^{nearby} of the lower jaw.

NEEDLE
GRINDING
&c.

In needle-grinding ^{& fork-grinding} cotton-spinning, working in hair, bristles, &c. ⁺ fine

*

At Freiberg mines, ~~at~~ ~~the~~ the age to quit work
on account of an asthmatic disability was, a few years
since, 40 years. Now, by some improvements, it has been
brought up to 45.

particles get into the air passages.

GLASS BLOWING

In glass-blowing, the intense heat & the interference with the normal action of the lungs, both contribute to shorten life. ~~These are the~~

COTTON SPINNING

Of 1000 cotton-spinners, 18 died every year; 41 coal men; 54 wool, hair &c. The average age at death, of flint-makers is 19 years. *with the color made from it,*

ANILINE.

The manufacture of aniline causes intense bronchitis ^{with periodic cough} & ulcers on the legs.

INDIA RUBBER

In vulcanizing india rubber, injury is produced by the ^{usually made of} sulphuretted carbon employed.

Head-ache, vertigo, & excitement of the nervous system, which may lead to insanity or imbecility, are all effects of this.

A glass screen with two holes for the arms should be used.

MINES.

Working in deep*mines, injures by the absence of light & pure air*.

SEDENTARY EMPLOYMENTS

All sedentary employments are unhealthy.

vaccinated. Beyond a doubt the mortality among the
 Mortality is less than among those not vaccinated.
 from 0 per cent. to 11.5 per cent.; with average of
 4 per cent.; among the non-protected it ranges
 from 14.5 per cent. to 60.6 per cent., average 30
 per cent.

INFLUENCE OF VACCINATION. — In the German army,
 vaccination and revaccination are obligatory. Ac-
 cording to statistics collected by the German authori-
 ties, the German army, which numbered a million men
 during the war with France, lost only 286 men by
 variola, while the French army lost nearly 26,000 by
 that disease.

TURPENTINE

Minor Evids: - Inhab

PHOTOGRAPH

WATCH
MAKING

VACCIN

you ask, 'How closely will the experience of the American physician coincide with this statement?' While the surgeon of the National Military Asylum, Eastern Branch, 1868-70, there were under my care many cases of consumption, mostly from two to five years' standing. Night-sweat was a very common symptom, and for its relief I learned to rely entirely on the oxide of zinc, three grains in pill at night, combined with a little hyoscyamus. It seemed as nearly entitled to the name of specific as any medicine in the Pharmacopœia."

SELECT FORMULÆ.

COMPOUND ARSENICAL PAPER. — The following is transcribed from the Receipt Book of the Philadelphia Hospital: —

Belladonna leaves	grs. xcvj.
Hyoscyamus “	grs. xlvij.
Stramonium “	grs. iv.
Ext. opium	grs. lxxx.
Tobacco	Oj.
Boiling water	

Add

Potass. nit.	grs. cxx.
Potass. arsenit.	grs. cccxx.

Take thick bibulous paper; soak it in this solution, and allow to dry. When set on fire and the flame extinguished, this paper burns slowly without flame, and emits a dense smoke which may be inhaled for the relief of asthma, often with very marked benefit. It is also useful in chronic bronchitis.

FOR EXCESSIVE PERSPIRATION OF HANDS OR FEET. — A German pharmaceutical journal recommends the following : —

Carbolic acid	1 part.
Burnt alum	4 parts.
Starch	200 parts.
French chalk	50 parts.
Oil of lemon	2 parts.

Make a fine powder, to be applied to the hands and feet, or to be sprinkled inside of the gloves or

everybody who bring
vaccinated. (1859)

In some places,
 In this city, officers

A FACTORY DISEASE—A curious form of disease has appeared in some of the flax mills at Belfast. It is thus described by a physician: "In Belfast a very painful malady is prevalent amongst the mill-workers, more so, I think, than in many other places, I mean 'onychia maligna.' The subjects of it believe that it is mainly caused by having to stand, whilst at work, in the water which drops from the spinning frames. They usually get a knock upon one of their toes, which inflames the nail drops off, and an exquisitely painful ulceration, with reproduction of a deformed nail, follows. They are thrown out of work, and it is only by a severe operation and protracted treatment in hospital that they are finally cured. Last year, in the general hospital, out of thirteen hundred cases, we had thirty-eight cases of onychia; several, however, were relapses." This painful disease, it is said, occurs much more frequently in Ireland than in England, because in the Irish flax-mills the men and girls work barefoot all day, "with the water from the flyers dropping upon them."

inated, 2.06 $\frac{3}{4}$ vaccinated
2.10 vaccinated & .42 of
died.

n Medical Academy,
of revaccination, it
proportion to the

not be revaccinated
year; again before 25th.
is a duty which should

Gold is slightly oversold, and loans are made at 1-32-1/2 per day. The payment of the Matcompons has a tendency to weaken the premium. At 10 A. M. the quotation was 135; 1 A. M., 135%; 12 M., 135%; 1 P. M., 135%; 2 P. M., 135%; 3 P. M., 135%; 4 P. M., 135%; 5 P. M., 135%.

As usual on steamer day, there were few or no operations in foreign exchange; quotation remain as sent yesterday.

The Scotia takes out \$100,000 in specie on freight.

The stock market at the earlier Boards was buoyant and active. Prices generally were better, but after the regular Board, under sale to realize, the leading descriptions yielded fractions. The market as yet has but feeble "outside" support. Governments are in stead demand for investment, particularly the new '65s and 7-80s. There being no quotations from London to-day, the business on foreign account is limited.

SMALL-POX NOTES.

MULTUM IN PARVO.—It would be difficult to condense medical information of great value into smaller compass than in the following extract from the *Boston Medical and Surgical Journal*:—

The following propositions are offered as matters of belief, and some of them as matters of record:

1st. Without vaccination, one death in ten from all causes would be the result of small-pox.

2d. Without vaccination, nineteen out of twenty would have small-pox.

3d. Without vaccination, sixty-seven per cent. of the cases of small-pox would be fatal.

4th. With vaccination, not two per cent. of the inhabitants will take small-pox.

5th. With vaccination, the percentage of deaths from small-pox is only about eight of the two per cent. who will take it.

6th. A larger percentage of those who have had small-pox will have the secondary disease than of those who have been vaccinated. That is to say, vaccinia is a better prevention of varioloid than small-pox is.

7th. Humanized virus is more likely to take than the original virus from the cow.

8th. Humanized virus, whether it takes or not, does not produce such severe constitutional symptoms as primary cow virus does.

9th. It is not proved that either humanized virus or primary cow virus is the better in its protective effects.

10th. There are certain individuals who do not seem susceptible of variola.

11th. There are certain individuals who do not seem susceptible of vaccination.

12th. The taking of small-pox after vaccination is no proof that a second vaccination would have succeeded.

13th. A successful re-vaccination is no proof that the individual re-vaccinated would have taken small-pox.

POISONOUS THREADS.—A French journal of hygiene states that a number of seamstresses have suffered from violent colic, in consequence of putting into their mouths the silk they use in sewing. This disease is attributed to the practice of mixing the silk with a preparation of lead (the sulphate) so as to increase its weight. A chemical analysis of many different samples of sewing silk has been made by Mr. Jones, of the Chemical Laboratory, Leadenhall street, London, which resulted, in almost every case, in the detection of large quantities of acetate or sugar of lead. This admixture is even more dangerous than that of the sulphate, on account of the greater degree of solubility of the sugar of lead in the fluids of the stomach.

papers and things have been put up, including a number of elegant brick and granite stores. He noticing this fact the Philadelphia *Centinel* takes occasion to sing the praises of Yankee energy and pluck, and instances Atlanta as another place that is indebted to it for its present Phoenix-like proceeds. But for Yankee energy and Dutch and pluck Atlanta never would have had ashes to rise from."

PECULIAR SUIT.—At the present term of the Circuit Court for Pittsylvania county, Va., a suit has been commenced against the town of Danville, for damages on account of liquors destroyed by order of the court, about the time of the surrender of the army. The liquor was destroyed as a precautionary measure to prevent straggling soldiers who were passing through in great numbers, from drinking to intoxication, in the event it was thought the town would be a danger of mob violence.

TRIAL.—The trial of Capt. William Grant for burning the ship *Young Mechanic* while on her command, on her voyage from

Beyond a doubt the mortality among the vaccinated is less than among those not vaccinated. Mortality varies empirically among the protected from 0 per cent. to 11.5 per cent.; with average of 4 per cent.; among the non-protected it ranges from 14.5 per cent. to 60.6 per cent., average 30 per cent.

INFLUENCE OF VACCINATION.—In the German army, vaccination and revaccination are obligatory. According to statistics collected by the German authorities during the war with France, which numbered a million men with variola, while the French army lost nearly 26,000 by that disease.

TURPENTINE

Minor Evils: - Inhalation of turpentine, causes dizziness in some.

PHOTOGRAPHING.

In photographing, the cyanide of potassium & the bichloride of mercury are injurious.

WATCH MAKING.

In watch making, copper causes nervous tremors & chills. "Brass founders' ague" also.

VACCINATION.

Vaccination: - In a London hospital, .35 of the unvaccinated, & .06 $\frac{1}{4}$ vaccinated died. In Berlin .10 vaccinated & .42 of the unvaccinated died.

REVACCINATION.

In the Belgian Medical Academy, of 2841 subjects of revaccination, it was successful in proportion to the length of time.

A person need not be revaccinated before his 45th year; again before 25th.

Vaccination is a duty which should be enforced. There are different plans.

MODES OF REVACCINATION.

In France, 3 franes are given to everybody who brings a child to be vaccinated. (1859)

In some places, penalties are inflicted. In this city, officers collect the cases

VITAL STATISTICS.

Population of Europe self-doubling in 120 to 3/4 of a century.

Vital Statistics

Population of the World, 1288 millions.

Most populous regions:

Egypt, China, England,

Marriages in Europe, 1 to 121 of inhabitants

" " W. S. 1 to 102 " "

Births to each marriage - 4

Births to population, about 1 to 30

Sexes - 9362 females born to 10000 males

9190 " die " " "

Deaths to population, W. S. 1 to 45

Inevitable mortality, ^{15%} 17 in 1000

annually

Average age at death, the world over, 33 yrs.

Longest lived - Judges

Paupers

Gentlemen

Shortest lived - Clerks

Laborers

Brakesmen

Females, longest lived - Shint-makers

Nurses

Shortest-lived
Dress-makers

Housekeepers

Teachers

Shoe-binders

Day Workers.

1377
1874, 270.
Belgium
1391, 032, 000Males 106
Females 100

of children who have not been vaccinated.
It should be compulsory.

The subject of

Lecture XXXVI.

one.

VITAL
STATISTICS.

Vital statistics is a very large ~~subject~~ ^{as yet} ~~one~~. It is also a difficult one. It is the ~~least~~ ^{most} ~~developed~~ infantile department of hygiene.

Three questions present themselves. What are vital statistics; what are they for; and, how are they to be got.

WHAT
ARE
VITAL
STATISTICS.

Vital statistics are estimates of population, sex, age, births, sex of births, marriages, deaths, sex of deaths, sickness, causes of sickness, &c.

LIFE
INSURANCE.

The system of life insurance depends on vital statistics. ^{in particular} ~~It does~~ ^{the study of the causation and prevention of diseases.}

HOW
TO
OBTAIN
VITAL
STATISTICS.

How can we obtain them? Individual efforts alone will not suffice. Medical men have ~~enough~~ to do with out it. It must be done by municipal authority, by compulsory means.

Authority has been very slow in doing this. In this state, it was difficult to get a law passed.

Hardly anywhere, are statistics

1872?

N.B. I will ^{gentlemen in examination} not question on the figures ✓
of this Lecture on Vital Statistics - unless
2 or three items designated as of special
importance.

The influence and usefulness of a medical man do not depend altogether upon what he knows of materia medica, or physiology, or surgery.

fifty years in Switzerland, in Geneva & in England. They show that in that time, the average length of life has been doubled.

All the figures which are given, are merely approximations. I select a few only.

Dietrich gives the population of the world as 1288 millions of which 369 millions are Caucasian, 552 Mongolians, 190 African, 1 American, & 200 Malay.

In Europe there are 89 to a sq. mile. Asia, 32, Africa 14, America 4. (Eurot)

The most populous countries, are Egypt, 1767 to a sq. league, China, ^{Asia,} and England 1457. France has 1062, Russia 161, Sweden & Norway 182, U.S., 58, and S. America, 21. London, 1 m² to 1220 sq. ft; Paris, 1 to 500 sq. ft.

Philadelphia has more houses ^{in proportion} than any other city. One 100,000 houses, 1870. New York almost

In Europe, there is 1 marriage to 121 inhabitants; in the U.S. 1 to 102. In Europe, the extremes are, Russia 1 to 99 & France 1 to 134.

The average number of births to a marriage, is 4.

INCREASE IN THE LENGTH OF LIFE.

POPULATION OF THE WORLD

MOST POPULOUS COUNTRIES.

HOUSES.

MARRIAGES.

BIRTHS.

— A new estimate of the population of the globe, based on the very latest returns, has just been published by Gotha statisticians, who make the sum total to be 1,377,000,000 souls. — The

1872?

N.B. I will not ^{gentlemen in examination} question the figures ✓
 of this Lecture on Vital Statistics — unless
 2 or three items designated as of special
 importance.

fifty years old. Oldest in Switzerland, ^{in England.} They show that in that time, the average length of life has been doubled. All the figures which are given, are merely approximations. ^{select a few only.}

Dietrich gives the population of the world as 1288 millions of which 369 millions are Caucasian, 552 Mongolians, 190 African, 1 American, & 200 Malay.

In Europe there are 89 to a sq. mile. Asia, 32, Africa 14, America 4. (Eurot)

The most populous countries, are Egypt, 1767 to a sq. league, China, ^{India,} and England 1457. France has 1062, Russia 161, Sweden & Norway 182, U.S., 58, and S. America, 21. London, 1 m² to 1220 sq. ft; Paris, 1 to 500 sq. ft.

Philadelphia has more houses ^{in proportion} than any other city. ^{over 100,000 houses, 1870.} New York almost

In Europe, there is 1 marriage to 121 inhabitants; in the U.S. 1 to 102. In Europe, the extremes are, Russia 1 to 99 & France 1 to 134.

The average number of births to a marriage, is 4.

INCREASE IN THE
LENGTH
OF LIFE.

POPULATION
OF THE
WORLD

MOST
POPULOUS
COUNTRIES.

HOUSES.

MARRIAGES.

BIRTHS.

* Malthus was wrong: subsistence
gains faster than his estimate.

The number is ^{generally} greatest in prosperity
varying with the supply of grain.

WEALTHY. Yet the educated & wealthy have smaller families than the poor.

It may be that the development of the nervous system is unfavorable to fertility. Is Mallen's "physiological law of increase"?

PROPORTION
OF
BIRTHS
TO
POPULATION.

Births to population:—Russia 1 in 23, Austria 1 in 26, Prussia 27, England 31, France 29. (U.S. 1 in 35 [supposed to be an

~~Most birds generally in prosperous times.~~
* ~~Maltheus says that~~ In Europe, the population

In Europe, the population increases in a geometrical ratio, 2-4-8-^{means 1/2 substitution} _{with natural -} 12-36

U.S. But destruction of population causes regulate the population. The population of the U.S. doubled in 25 yrs; quadrupled in 50 years.

DOUBLE
POPULATION
IN
25
YEARS

Independently of immigration, it has increased faster than that of any other country.

This is a contradiction of the assertion that there is a degeneration of race in America.

BELGIUM
HOLLAND
ENGLAND

Boudin says that Belgium doubles its population in 41 years, Holland in 42, England in 78.

A System of conscription, ^a ~~large~~ standing army
 has been literally ruinous to France. During Crimean
 war, Surgeons noted the marked difference in endurance
under wounds & operations, between English & French
 Soldiers; the French having the greatest relative mortality
 under injuries. The average French physique has
 no doubt degenerated, — and with it the morale, —
 since the first Napoleonic wars. (Physique & morale
 not one, — but much connected.) — 3 causes of
 deterioration there have acted for many years; 1. the semi-
 voluntary celibacy of a numerous Roman Catholic
 priesthood & sisterhood; 2. the enforced celibacy of
 all regular soldiers; 3. the consumption of mothers
 not nursing the child. —
 Standing armies, which statesmen have shown to be the
 great promotive causes of European wars, are now proved
 by the instance of France at least, to be otherwise and
 every way detrimental to the interests of nations.

Germany in 79, Russia in 99, and France in 138. And this was before the war of 1870-71. *

EXCESS
OF
MALE
BIRTHS.

There are more males than females born. ^{10000 to 9682 U.S.} There is also an excess of male deaths. ^{10000 to 9190 U.S.} In the 1st. year more males die. In the 2nd. the proportion is equal. 14-15 ^{yr} more females; 21-26 ^{yr} more males; 31-45 ^{yr} more females; over 45 ^{yr} more males.

PROPORTION
OF
MALES
TO
FEMALES.

Proportion of males to females:- In New England, females are in excess; in Utah, also.

In California not long ago, there were 19 females to 100 males.

Connecticut is intermediate.

DEATHS
TO
POPULATION.

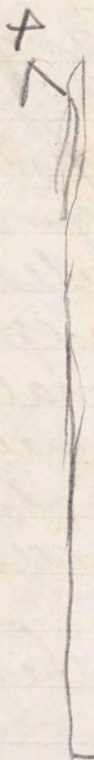
Deaths to population:- In France, 1 to 45, to 1 to 40; Russia 1 in 28, Austria 1 in 33, Prussia 1 in 38, England 1 in 45, Massachusetts 1 in 47, U. S. 1 in 45.

LENGTH
OF
LIFE

In France, the mean duration of life is 34 years. It has gained 5 years in 60. In the manufacturing districts of France, 25 years is the mean duration.

WARS

After great wars and pestilences,



since the war,

(See "Home Book")

San Francisco (before reported destroyed) burned at sea in lat 2 N, lon 135 W, on the 3d of May. One of the ship's boats, containing twelve of the crew, two passengers, named Ferguson, and the captain, arrived at the Sandwich Islands on the 15th of June, in a state of starvation, having been exposed in the long boat 43 days. Two other boats, with about twenty persons, in charge of the first and second mates, continued in company until the nineteenth day, and are yet to be heard from. The ship had a large quantity of kerosene on board, and it is supposed the fire originated from it or near it, as the vessel was consumed so fast that they could scarcely save anything.

Schr Charlotte Fish, from Boston for Philadelphia, was in contact with an unknown schr night of the 7th inst on Nantucket Shoals; lost jibboom and head gear, and put into Holmes' Hole on the 8th.

GOODS FOR THE LADIES.

MERINO GAUZE

ER-GARMENTS.

BUENOS AYRES

MORTALITY
OF
DIFFERENT
CITIES.

In Buenos Ayres, foreigners have more male children, & natives more female.

In 1863 Dr. Snow of Providence gave for New York, a mortality of 1 in 35.7, Boston 1 in 41.2, Newark 43.5, Providence 45, Hartford 54.8, London 45, Liverpool 44, Philadelphia from 1 in 44 to 1 in 57.

The mortality in New York is great and has been till lately increasing, especially in children. *cholera infantum - large diarrhoea - pectoral complaints - measles*

The mortality of New Orleans was fearful, 80 in every 1000. Our local statisticians say, ours is as low as that of any other city. *in Philadelphia*

AGE
AT
DEATH

Age at death: Six per cent ^{of all born} die in the first year. One fourth die under 7 yrs.

In England the average age at death is 29. Manchester 20, Liverpool 17. The world over 33. *Longer in the country than in cities.*

unusual number of births
of male births.
band is a dozen years
wife, the children are
male & vice versa.

since the war,

STATURE OF AMERICAN SOLDIERS.

At the session of the American Academy of Science the other day, a paper was read by Dr. B. A. GOULD, which, not being upon so abstruse a subject as is usually discussed by the majority of the savans, is likely to interest the public. It was upon "the stature of the American soldiers," and was founded upon the measurement of one million of soldiers—quite sufficient for any one to found a lumber of very pretty themes upon. These measurements are not taken, at least not preserved, in the first months of the war. It was not until recruiting had become a regular thing that attention was paid to the necessity of preserving the Government records of the height of soldiers. From the results of the records it is shown that

(See "Home Book")

there is an unusual number of births and an excess of male births.

When the husband is a dozen years older than the wife, the children are generally all male & vice versa.

BUENOS AYRES

In Buenos Ayres, foreigners have more male children, & natives more female.

MORTALITY
OF
DIFFERENT
CITIES.

In 1863 Dr. Snow of Providence gave for New York, a mortality of 1 in 35.7, Boston 1 in 41.2, Newark 43.5, Providence 45, Hartford 54.8, London 45, Liverpool 44, Philadelphia from 1 in 44 to 1 in 57.

The mortality in New York is great and has been till lately ^{children in infancy - large deaths - pectoral complaints & measles} is increasing, especially in children.

The mortality of New Orleans ^{before the war} was fearful, 80 in every 1000. Our local statisticians say ^{in Philadelphia} ours is as low as that of any other city.

AGE
AT
DEATH

Age at death:- Six per cent ^{of all born} die in the first year. One fourth die under 7 yrs.

In England the average age at death is 29. Manchester 20, Liverpool 17. The world over 33. Longer in the country than in cities.

* Working women, in all avocations, have harder times than men; they receive less wages even for the same kind of work; & when self-dependent, often suffer ~~great~~ privations. The difference between their remuneration for labor, skilled & unskilled, and that of men, is too great for justice or humanity.

U.S.

The population of the U. S. is younger & more vigorous than that of Europe.

More men live long. in Great Britain.

MODE
OF
LIVING.

Mode of living:- Of 112 English peers, the average age was 66.

At Berlin, the average of the better class is 50, of the poorer 32. (Casper).

Friendly societies of England, 49 $\frac{3}{4}$ yrs.

In England, miners 41, plumbers 37, and clerks 32: average habits must have to do with it.

In the U. S., laborers have ~~very~~ ^{comparatively} short lives. In Massachusetts, judges & justices 67, paupers 65, gentlemen 64, bank officers 61 $\frac{1}{4}$, millers 61 $\frac{1}{2}$, clergy 56 $\frac{1}{2}$, lawyers 56 $\frac{1}{2}$, doctors 55 $\frac{3}{4}$, agriculturists 47, artisans 46, glass-blowers 40, clerks 33 $\frac{3}{4}$, laborers 34, brakesmen 27 (owing to accidents), flint makers 19. habits, again? Complex.

FEMALES.

Of females:- In Massachusetts, nurses lived the longest, 54.6, housekeepers 51, shoebinders 45 $\frac{1}{2}$, domestics 44, seamstresses 44.8, dressmakers 32 $\frac{1}{2}$, strawbraiders 25, teachers 28, day laborers 27.7. *

Anglo Brazilian Times, 1873 (Phil Med Times
April 12, 73) asserts that at a recent census in
Brazil, there was found living at Cape Frio,

Jose Martins Coutinho, 178 years old in 1872,
married 6 times, had 42 children, 123 grandchildren,
86 gr. grand ch., 23 gr. gr. grand ch., & 20 children of
the latter; 294 descendants ~~offspring~~ his life-time.
If he lives this year though, pretty certainly they will
number up to 300. The part of it most open to
doubt, of course, is the number of his own years;
but that is not impossible.

Sept. 17th 1873, Christian Union quotes from Louville Courier
Journal, account of a physician who had just visited
Fortune Snow, a black man living at Eaton, Tennessee,
124 years old; says he was 25 when the Revolutionary
war broke out. —

OLD AGE.

* ←

Instances of Old Age:— Hippocrates & Galen, 100, St. Anthony 105, St. Jerome 100. Lillian & Cornaro, nearly 100, A. Francis 140, Jas. Lawrence 143, Thos. Winslow, 146, Jos. Effingham 144, Claude Jacob 126, Jos. Krole (a great smoker) 141. Rachel Peter Currier 146 in London and 144.

CAUSES OF DEATH.

PHTHISIS.

In France in 1842, there were 46 over 100. Causes of death:— War & accident take off many; hundreds of thousands in modern wars!

Phthisis takes the lead. In England 50,000 die ^{of disease} annually. In N. York, 6000 of 10,000. Maryland 2000 of 10000 deaths. U. S. Census of 1880, ^{over 2 per cent. of all deaths,}

DYSENTERY & DIARRHOEA

FEVERS.

Dysentery & diarrhoea come next, except that all fevers together would be more, 20,000 annually in England from typhoid alone.

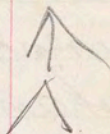
CHILDREN.

Diseases of children are worse in the north, yet they are most in summer.

Dr. Jarvis says that of 1000 deaths in Massachusetts, 314 were from the lungs, 137 digestive organs, 78 brain, 54 old age.

In England 3 phthisis, 20 typhus, 40 small pox.

Phthisis & pneumonia are commoner



Statistics of Disease

this happens—he is for ever afterwards prohibited from practising his profession—a regulation that might, perhaps, prove advantageous in other countries. Visits are never charged; they simply charge for the medicine used, and it is always on trust until the patient gets better—conditions not very favorable for large incomes and great wealth.—DR. WILEY, Cinn. Lancet and Observer.

A Fatal Epidemic in the Island of Mauritius.

The Overland Commercial Gazette, a paper printed at Mauritius, gives a full account of a disease raging on that Island, and especially at Port Louis.

This disease is a non-contagious fever, yet it is epidemic, and has assumed a most virulent form. Upwards of six thousand persons died in March, and the first half of April the mortality of the island reached upward of five thousand more. Port Louis alone, during this latter period, lost two thousand eight hundred and seventy-nine, out of a population of eighty thousand. The disease seems to be confined mainly to the north-west part of the island, and the number of deaths up to the 18th of April, is estimated at 13,564 in the aggregate.

The cause of the disease is thought to be the filthy and crowded state of affected districts—at least, it is much aggravated by this, since those plantations where any care has been taken have been nearly free from the epidemic. Medicine is also exceedingly scarce, and on the 15th of April quinine was publicly sold, at £12 an ounce. The

in cities the
In this city
is consumption,
monia, convulsions
phus & typhoid
small-pox.

The smaller
in some rural
Amount of
portant to
sick & of who
neglect this.

In Manchester there is 1 death for
28 cases of sickness. In our army
1 for 6 cases. The greater the mor-
tality the greater the amount of
sickness. *new notes* *Statistics of Diseases.*

We now take up the subject of
Hygiene of the Sick Room:—The prac-
tice of medicine is getting to be
more and more hygienic.

The elements of importance in the
sick room, are, light, sound,
clothing, air, food, & mental management.

THE
ORDER
IN
PHILADELPHIA.

AMOUNT
OF
DISEASE.

MANCHESTER

SICK
ROOM.

WHAT ARE
IMPORTANT.

may
re-
f-
ref.

oo
ind.

n-

re

1
that that

Influence of Condensation of Population on Life.

The Boston correspondent of the New York *Evening Post*, says that Dr. EDWARD JARVIS, of Dorchester, recently read a paper on the effect of Condensation of Population on Life, from which it appears that it is extremely rare to find a citizen of Paris with many generations of Parisians among his progenitors. London needs ten thousand recruits from the country every year to keep its numbers good. There is a much larger proportion of deaths by zymotic and nervous diseases, in the city than in the country, while the proportion of deaths by old age is thirty-seven per cent. larger than in the city. The mortality of children is much larger in cities than in the country—the excess of deaths of children under five years in English towns and cities from 1851 to 1860, being one hundred and fifty-two per cent. over the population prevailing in the country. Much of this excessive mortality is attributable to destitution and privation; the dangerous occupations and protracted labors of many of the inhabitants of cities; the compactness, narrowness and crookedness of the streets, leaving little chance for the circulation of air; and the extreme mental exertion and undue expenditure of the vital powers by the better classes. In so far as the causes could be removed the rate of mortality will be lessened. Sanitary improvements in nineteen towns and cities of Great Britain had reduced the rate of mortality from twenty-eight in one thousand to twenty-one in one thousand. In Liverpool the decrease was thirty per cent.

Statistics of Disease

in cities than in the country.

In this city the order of frequency, is consumption, scarlet fever, pneumonia, convulsions, marasmus, typhus & typhoid, diarrhoea & dysentery, small-pox.

N.B. to 15

The smallest mortality is 17 in 1000 in some rural districts of England.

Amount of disease:— It is important to know how many are sick & of what sick. Physicians neglect this.

D. Lyon Playfair has estimated that

In Manchester there is 1 death for 28 cases of sickness. In our army 1 for 6 cases. The greater the mortality the greater the amount of sickness. *new notes* ← *Statistics of Disease.*

We now take up the subject of Hygiene of the Sick Room:— The practice of medicine is getting to be more and more hygienic.

The elements of importance in the sick room, are, light, sound, clothing, air, food, & mental management.

THE
ORDER
IN
PHILADELPHIA.

AMOUNT
OF
DISEASE.

MANCHESTER

SICK
ROOM.

WHAT ARE
IMPORTANT.

LIGHT.

^{some} Light:- In all acute ^{inflammatory} diseases, it must be excluded. In chronic diseases, it must not. In choosing a consumptive's room, it should be sunny & cheerful.

SOUND.

Sound:- An irritable brain must not be jarred. It is barbarous to stamp into a sick room. The physician must have regard to the state of the patient. Such little things materially affect a physician's success.

CLOTHING.

Clothing:- It must be adapted to the needs of the patient. It must be changed frequently to allow of transpiration. Nurses are often afraid to change a patient's clothing because of the cold & fatigue. Sometimes this is a very good excuse, but when possible it is best to change.

AIR.

Air:- It is necessary for the sick. A gentleman who had typhoid pneumonia could not suffer the windows to be shut, although it was so cold

light

1000

1000

1000

1000

that a large fire had to be kept in the room.

FOOD.

Food:- This has been treated of already.

MENTAL

MANAGEMENT.

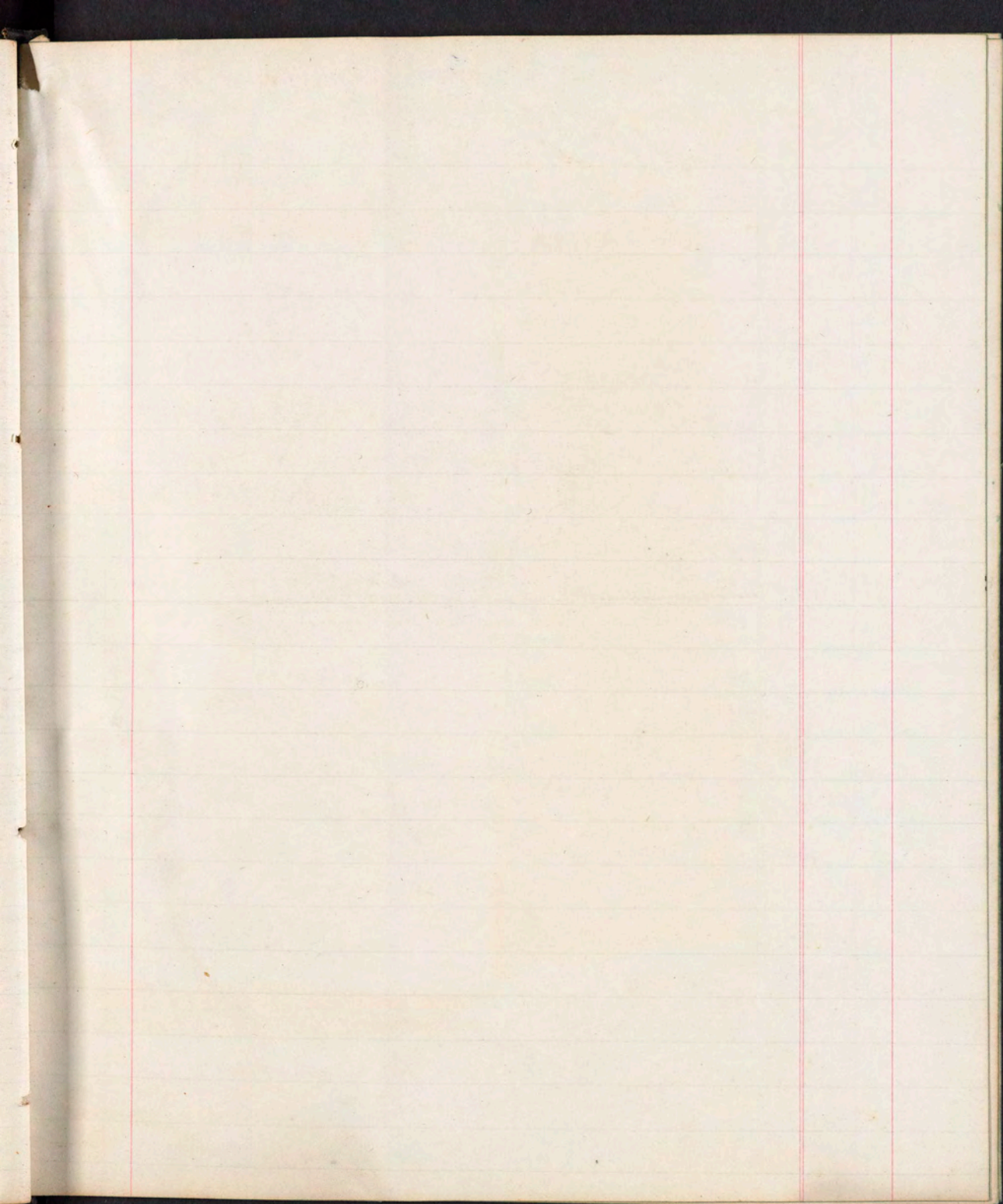
Mental management:- Judgment is necessary in attending the sick. Sometimes a person, in the hearing of the patient, will anxiously ask the physician "how long will he live?" Such things are out of place.

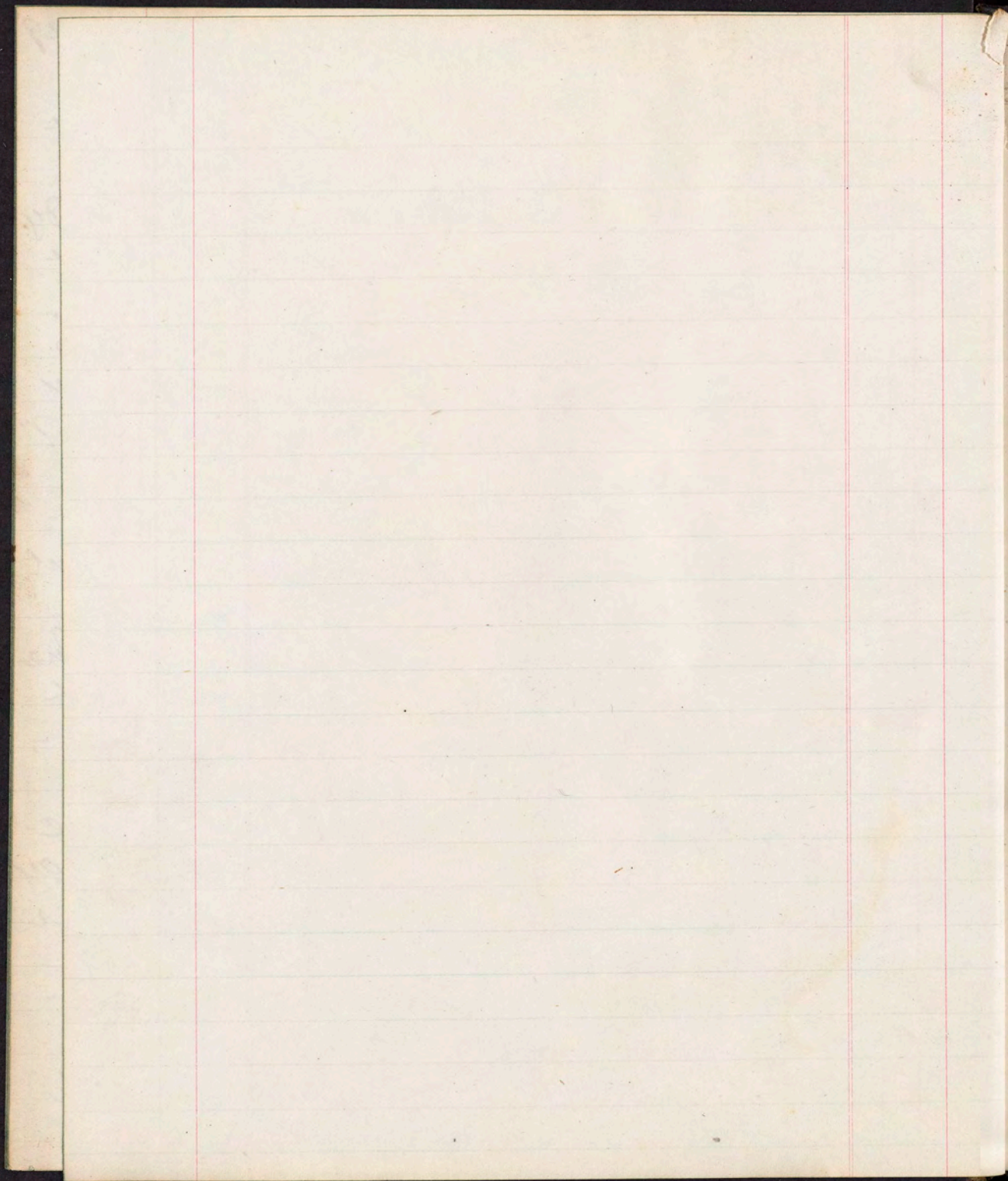
It generally has a bad effect. Sometimes however, it revives a patient. A gentleman overheard his physicians talking of his death. One said "I would like to be present at the post-mortem". This immediately revived him.

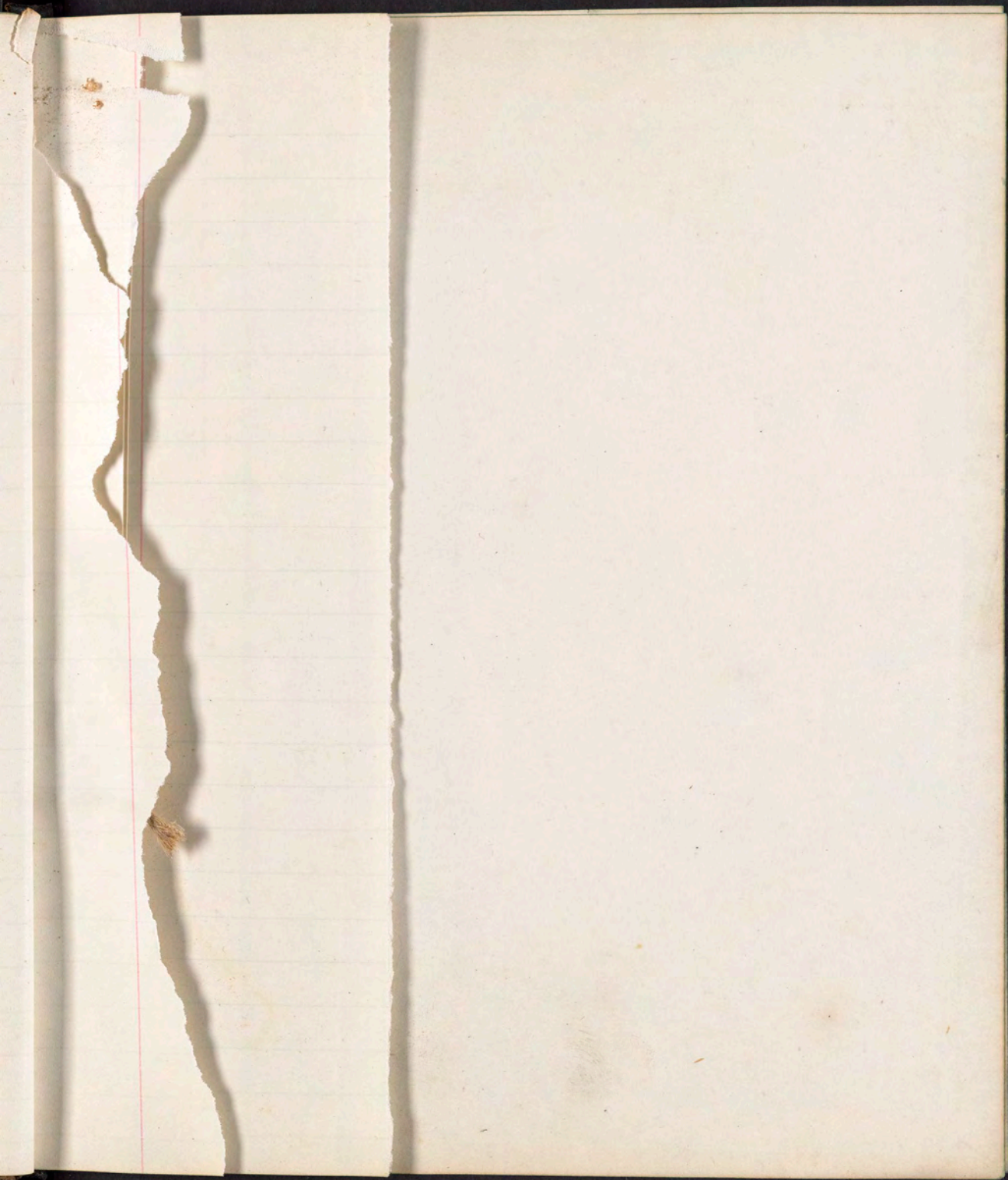
Recoveries often happen miraculously, so that we should not say that a person will die, until there is no hope left.

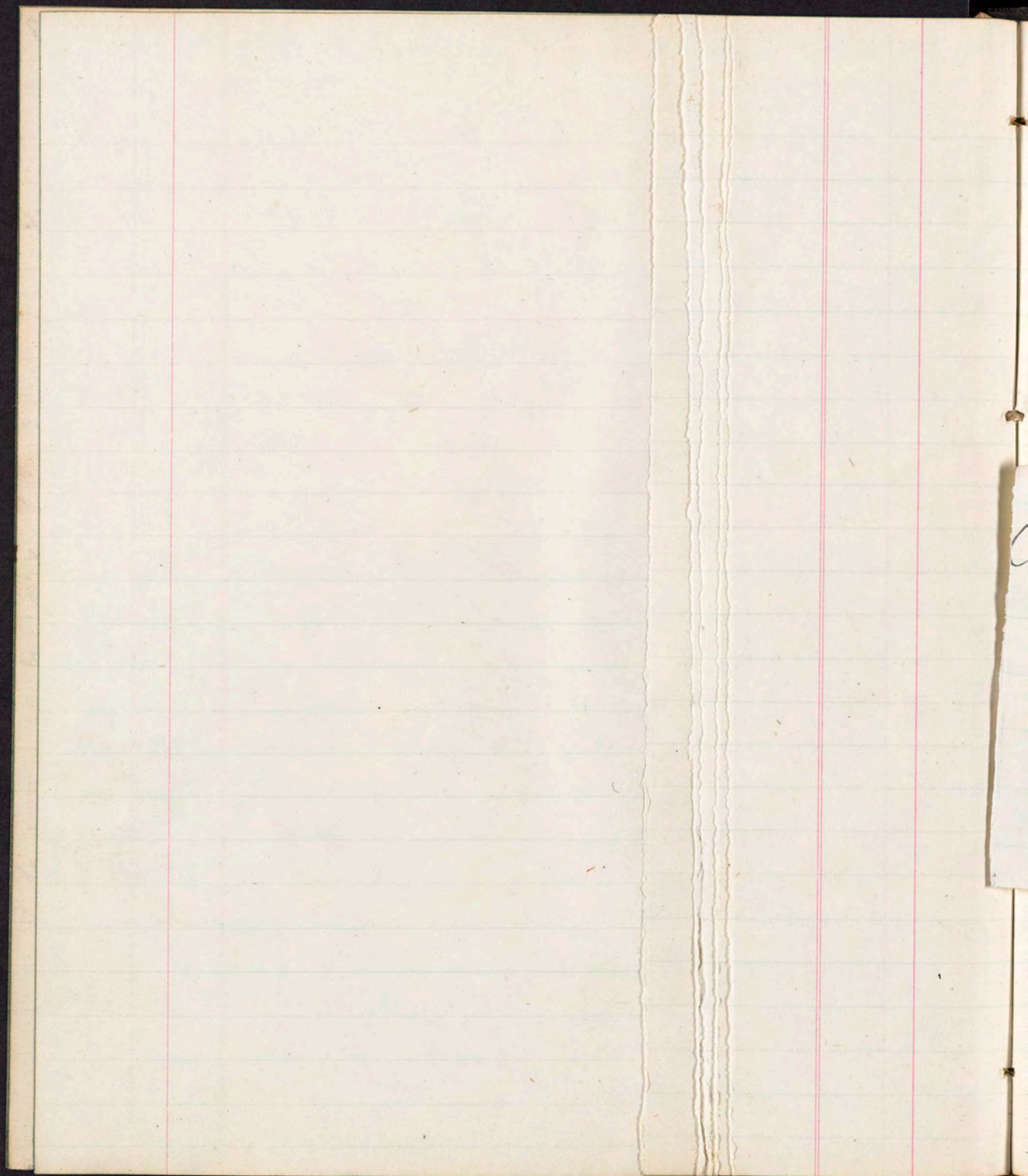
For moral reasons we cannot disguise the facts often.

We must be careful to avoid shocks.









C. D. M. 141 fl.

bet. 39 & 40

West Phila

Natural

Handwritten text on a small piece of lined paper, possibly a note or a label, pasted onto the main sheet of paper. The text is faint and appears to be written in blue ink. It is mostly illegible due to fading and the angle of the paper. Some words are difficult to decipher but seem to include "The", "of", and "the".



